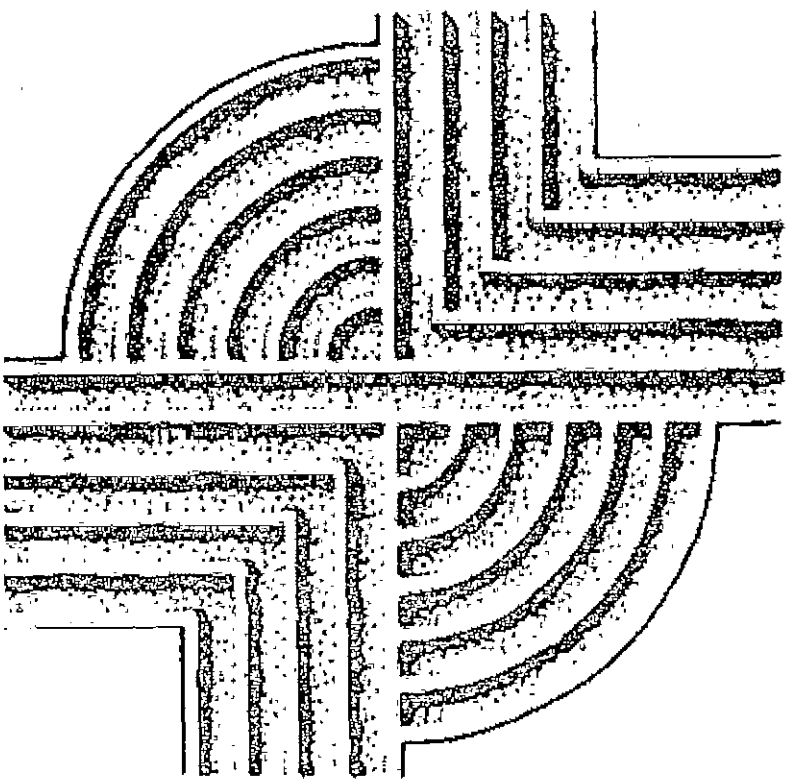
ARCHAEOLOGICAL SURVEY OF THE HANES MILL LANDFILL EXPANSION, FORSYTH COUNTY, NORTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 278

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ABSTRACT

This study reports on an intensive archaeological survey of the proposed Hanes Mill Landfill expansion in Winston Salem, North Carolina, Forsyth County. This tract consists of approximately 260 acres west of the existing Hanes Mill Landfill. The study was conducted at the request of HDR Engineering Incorporated of the Carolinas.

The archaeological survey consisted of shovel testing at 100-foot intervals in areas of high probability for archaeological resources and 200-foot intervals in areas of low probability for archaeological resources. In areas of 75% or greater surface visibility, a pedestrian survey was undertaken. Shovel tests were not excavated in areas of standing water, in areas of extensive disturbance, or in areas with more than 10% slope.

Prior to this study no archaeological sites had been identified in the immediate project area. As a result of this study, a total of 20 sites were located. These sites include 31FY1065, 31FY1066, 31FY1067, 31FY1068**, 31FY1069, 31FY1070, 31FY1071, 31FY1072, 31FY1073**, 31FY1074, 31FY1075, 31FY1076, 31FY1077, 31FY1078 & 1078**, 31FY1079, 31FY1080 & 1080**, 31FY1081, 31FY1082, 31FY1083, 31FY1084**. None of these sites are recommended as potentially eligible, and pending concurrence with the lead agency and the State Historic Preservation Office, no further management work is recommended.

There is the possibility that previously unrecorded resources will be identified during construction. Crews should be made aware that if pottery, arrowheads, concentrations of bricks, or the presence of bones are found in the project area, ground disturbing work should be suspended until the finds can be assessed by either the project archaeologist or the State Historic Preservation Office.

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ACKNOWLEDGMENTS

We would like to thank Mr. Michael Wolfe of HDR Engineering Incorporate of the Carolina for his support of Chicora Foundation.

We also appreciate the efforts of Site File Registrar Mr. John Mintz of the North Carolina Office of State Archaeology for his tremendous help in locating information on previous surveys and identified resources.

Finally, here at Chicora, we would like to thank Ms. Debi Hacker for the maps and graphics she produced for this report and Ms. Jan Schweikert for help in cataloging artifacts.

INTRODUCTION

The intensive archaeological investigation of the Hanes Mill Landfill expansion in Forsyth County was conducted by Chicora Foundation, Inc. for HDR Engineering, Incorporated of the Carolinas. The tract is situated north of Winston Salem in the northern portion of Forsyth County in the Piedmont of North Carolina(Figure 1).

The tract is located near NC State Highway 52 and the Hanes Mill. The current landfill and the proposed expansion area are separated by Grassy Creek (Figure 2). A number of small fingers of Grassy Creek are located throughout the survey tract, creating low wetland areas among the ridgetops and steep slopes. The ridgetops and midslopes are forested with pine and oak. The vegetation of the lower areas of the tract consist of mesic forests and grasses. To the north , the tract is bounded by Ziglar Road. The northwestern, western, and southern boundaries are marked by a fence which separates the tract from residential areas. Two sets of north-south power lines and towers bisect the tract and a power line maintenance road allows access to most parts of the tract. In addition, a number of small dirt and overgrown roads were located throughout the tract. At the time of the survey, a central portion of the tract was being used as a borrow pit.

This project was undertaken to locate and record archaeologcial and historical resources on the Hanes Mill Landfill Expansion tract. We were requested by Mr. Michael Wolfe of HDR Engingeering, Incorporated of the Carolinas to submit a technical and cost proposal for an intensive survey of the tract on May 6, 1999. This proposal, submitted on May 10, 1999 was approved on May 20, 1999. This tract would serve as an expansion to the current landfill and would significantly alter the landscape and most likely destroy any archaeological resources in the tract.

These investigations incorporated a review of the site files at the North Carolina Office of State Archaeology. No previously identified sites were found in the immediate project area. Archival and historic research was undertaken in Chicora Foundation's research files.

The primary goals of this study were to identify the archaeological resources located on the 260 acre portion of the proposed landfill expansion and assess the ability of these sites to contribute significant archaeological, historical, or anthropological data. The assessment of the resources essentially involves the site's eligibility for inclusion on the National Register of Historic Places, although Chicora Foundation provides only an opinion of National Register eligibility and the final determination is made by the State Historic Preservation Officer. The survey was conducted by Ms. Rachel Campo and Dr. Michael Trinkley on June 22-25, 1999. A total of 65 person hours were required for this investigation.

A total of 20 archaeological sites were identified during this survey, including fifteen lithic scatters (31FY1065, 31FY1066, 31FY1067, 31FY1069, 31FY1070, 31FY1071, 31FY1072, 31FY1074, 31FY1075, 31FY1076, 31FY1077, 31FY1079, 31FY1081, 31FY1082, and 31FY1083), three historic sites (31FY1068**, 31FY1073**, and 31FY1084**), and two multi-component sites (31FY1078 & 1078**, and 31FY1080 & 1080**). None of these sites are recommended as potentially eligible for inclusion on the National Register of Historic Places, pending concurrence with the North Carolina State Historic Preservation Office.

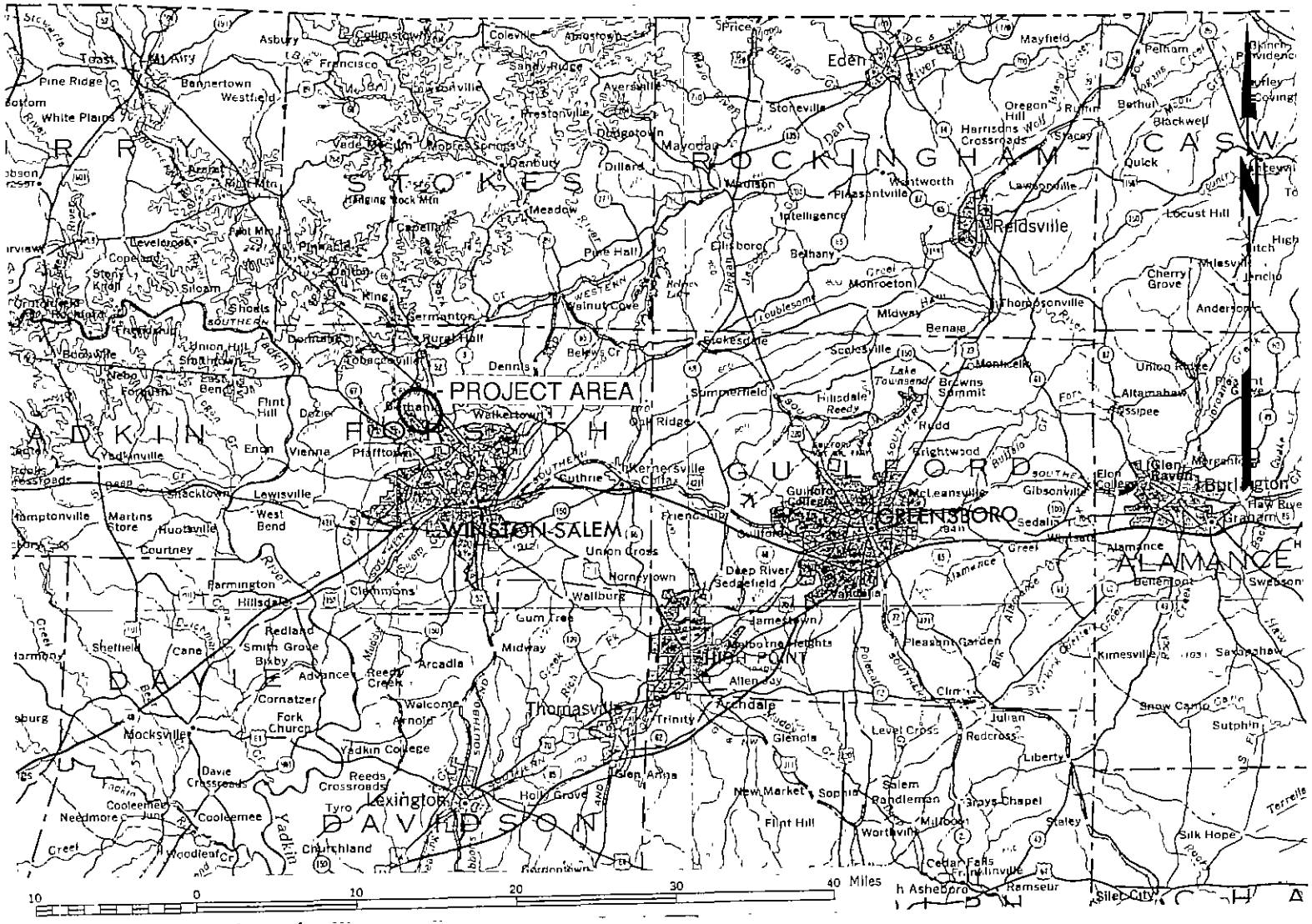

Figure 1. Hanes Mill Landfill Expansion tract in Forsyth County (base map is USGS North Carolina 1:500,000).

Figure 2. View of Hanes Mill Landfill expansion tract (base map is USGS Rural Hall 1951R94, 1:24,000).

NATURAL ENVIRONMENT

Physiography

The project area for the Winston-Salem landfill expansion is situated just northwest of downtown Winston-Salem in central Forsyth County, North Carolina (Figure 1). On the west side of US 52, the existing landfill is in an industrialized section of the county, although the new landfill will be largely surrounded by housing developments and, in several areas, pasture or agricultural lands.

Forsyth County is about 95 miles west-northwest of Raleigh, in the middle Piedmont Plateau in the north-central portion of North Carolina. The county contains 271,360 acres of land, most of which (42%) is forested. About a third of the county is in pasture or cropland, with the remainder taken over by industrial or residential development (Robertson 1960:1).The county, roughly square in shape, is bounded by Stokes County to the north, Guilford County to the east, Davidson County to the south, and Yadkin and Davie counties to the west. This western boundary is formed by the Yadkin River, which flows southward, becoming the Pee Dee River in South Carolina.

The Piedmont, located between the Mountain and Coastal Plain regions, is an area of dendritic drainage and red clay. Robertson (1960:61) identifies the area as a peneplain, dissected by moderately swift streams flowing south or southwest. The name "piedmont" means "foot of the mountains," which describes the general topography: a rolling eroded plateau with rounded hills and low ridges (Gade et al. 1986:146). Forsyth County is gently sloping to rolling and, in many areas, has fairly broad ridges. The smoother, less steeply sloping areas of the county are in the vicinity of Kernersville and Union Cross to the east and southeast, while far more hilly topography characterizes the region along the Yadkin, to the west, and on the northern edge.

Forsyth is classified by Gades et al. (1986) as just within the Piedmont Uplands. In this area drainage is controlled by a general slope of about 10 feet per mile, although it is often modified or affected by rock structure, most often by deep layers of weathered saprolite. Best known is the Carolina Slate belt of metamorphic volcanic rock situated to the east, running from about Granville County southwesterly to Union County.

The study area is a transition zone. Much of the area is steeply sloping northward toward Grassy Creek and its tributaries, although several broad ridges are also found in the project area, including one in the southeast corner of the project area and another on the northwest edge (Figure 2).

Elevations in Forsyth County range from about 700 feet above mean sea level (AMSL) on the Yadkin River to 1,105 feet AMSL west of Rural Hall about 4 miles to the north of the study area. In the project area the elevations are closer to the county's average of 800 feet, ranging from about 800 feet AMSL on Grassy Creek to about 940 feet AMSL on the ridge tops.

Robertson (1960:61) notes that about 80% of the county is drained by the Yadkin and its tributaries. Grassy Creek, which is the dominant drainage in the project area, separating the proposed landfill extension from the existing landfill to the east, flows southerly, emptying into Mill Creek, then into Muddy Creek, and eventually into the Yadkin, about 8 miles to the west.

Geology and Soils

As previously mentioned, the Piedmont's landscape has a rolling surface of gentle to steep slopes. Each peneplain is cut or bounded by valleys of even steeper slopes which often have a depth of several hundred feet. This landscape is most noticeable in the

interior, away from the Fall Line edge, where the effects of increased erosion are clearer. As you move toward the mountainous Blue Ridge. peneplain development becomes more incomplete and monadnocks more abundant. Although the closest to the project area, are the Sauratown Mountains about 50 miles to the northwest, these features are worthy of special note since they may have been mistaken by early Spanish explorers as actual mountains (Wilson 1983:27).

Perhaps the most significant feature of the region's geology is its effect on prehistoric lithic technology. Quartz is the most abundant material, being found in the nearby Kings Mountain formation and also readily available as veins in the crystalline gneisses and schists which underlie (and yield through decomposition) the red clays of the Piedmont uplands. The quartz, however, is harder than the associated rocks and decomposes more slowly than the surrounding matrix. As a result, vein quartz often appears on the surface or very near to the surface.

Another raw material of particular significance is soapstone, which is found on the Yadkin River in several areas of upper Forsyth County (Ferguson 1980; Woodall et al. 1984:8). The metavolcanics, such as argillite and rhyolite, are widely available from localized outcroppings of the Carolina Slate Belt, east of the project area. Of particular importance are the cryptocrystalline deposits which supply the best materials for knapping. Although other materials, such as chalcedony and even chert, are occasionally found as tools in this section of the North Carolina Piedmont, these materials are extra-local, coming from either nearby counties or, in the case of chert, from either Tennessee or western North Carolina.

The project area consists of seven defined soil series, including the Chewacla, Gullied Land, Hiwassee, Madison, Pacolet, Pacolet-Urban, and Wilkes soil series or complexes. Of these, the most common is Hiwassee, which comprises almost three-quarters of the acreage (Table 1). These soils exhibit considerable variability, but are generally well drained, gently sloping to moderately steep soils formed from gneiss and schist. They are the "typical" red clays of the Piedmont uplands and, in the survey area, are found both partially intact and eroded.

Table 1.
Soils in the Project Area

Soil Series	% of Survey Area
Chewacla loam	9.5
Gullied land	1.5
Hiwassee loam, 2-6%	19.9
loam, 6-10%	11.0
loam, 10-15%	2.5
clay loam, 2-6%, eroded	8.9
clay loam, 6-10% eroded	26.7
clay loam, 10-15% eroded	5.5
Madison fine sandy clay, 15-45%	3.1
Pacolet clay loam, 15-45%	7.7
Pacolet-Urban land complex	2.2

The Hiwassee loam with a 2 to 6%slope is found on broad upland ridges. The upper 0.8 foot often consists of plowed reddish-brown (5YR3/4) loam as an Ap horizon overlying a dark red (2.5YR3/6) clay B21t horizon with a depth of up to 32 inches. These soils account for nearly a fifth of the survey acreage. As the slopes on the Hiwassee soils increase, the depth of the A horizon decreases, although the underlying B horizon changes little. Fully two-fifths of the project area falls into the classified of eroded Hiwassee soils, with slopes ranging from 2 to 15%. These soils lack an A horizon and the B horizon may be eroded to only a fraction of its original depth.

The next most common upland soil is Pacolet clay loam, 15 to 45% slopes, eroded. This series is found on long, narrow lower side slopes and in other irregularly shaped areas. The surface soil is yellowish-red to reddish-brown clay loam up to 0.5 foot in depth, representing the B horizon of intact Pacolet soils. Madison fine sand loam, 15 to 45% slopes, is also on narrow side slopes, usually adjacent to streams. Like the Pacolet soils these also have a yellowish-brown surface soil, usually 0.2 to 0.3 foot in depth, overlying a red clay subsoil. The Wilkes soils are found on slopes of 6 to 10%, usually on narrow ridges and upper side slopes.

The surface soils are dark grayish-brown to olive-brown loams or fine sandy loams around 0.5 foot in depth. The subsoil, which was exposed in some areas of the project, consist of a strong-brown to olive clay.

Figure 3. Area of recent gullies in the survey tract.

The only lowland soil in the survey area is Chewacla loam. This series is poorly drained and is found on long narrow stream flood plains, being formed in recent alluvium. In the project area it borders Grassy Creek. The profile includes up to 0.8 foot of dark brown (7.5YR4/4) Ap loam overlying between 0.5 foot of similarly dark brown B1 horizon loam and 0.4 foot of clay loam, which forms the B21 horizon.

Over half of the soils in the project area are classified by the Soil Conservation Service as eroded, with the loss of all of the original A horizon and, in many cases, some of the underlying B horizon. An additional 13.3% of the soils are classified as consisting of slopes over 10%.

In the Piedmont area, soil erosion has been a common problem due to poor farming practices, such as shallow plowing and limited crop rotation, and the conversion of rural areas to residential subdivisions, shopping malls, industrial complexes and highway systems (Gade et al. 1986:149). Areas of exposed red clay or gullies were noted in several survey areas, demonstrating the fragile nature of the Piedmont uplands (Figure 3). The Hiwassee and Pacolet soils are particularly susceptible to erosion, from either improper development, logging, or cultivation.

Forsyth County is part of what Trimble (1974) calls the Mixed Farming Area of North Carolina and Virginia. He observes that the area generally had a low erosive land use history. Early in the eighteenth century the area was considered wild and little farmed. By the first quarter of the nineteenth century farming was more common, but still largely concentrated in the fertile bottoms, with the uplands still primarily in forest land. It wasn't until after the Civil War that the uplands began to see increased erosion, largely through the pressures of tobacco.

By the time of Great Depression, the Soil Conservation Service characterized much of Forsyth County as having "severe sheet erosion [with] frequent gullies" (Lee 1934). The project area is situated on the edge of this severe erosion and an area of lesser erosion, where the soils were classified as exhibiting "moderate sheet erosion." Trimble maps Forsyth as comprising a "black hole" of very heavy erosion — with the loss of over a foot of soil — surrounded by total erosion rates of 0.8 to 0.5 foot (Trimble 1974:Figure 2).

As a result, the archaeological potential of the nearly two-thirds of the survey area characterized by soils defined by the USDA as eroded or has having

slopes of 10% or more is very low. Coupled with this is the history of extensive erosion in the uplands of the county — further reducing the archaeological potential. These problems were frequently identified in the survey tract. Shovel tests reveal extensive areas with red clay at the surface, or within 0.1 foot of the surface. Gullies are still present in several areas of the tract. And where the ground has been exposed, by either logging or development activities, erosion appears almost immediately.

Figure 4. Old field with gullies and saplings.

Climate

Elevation and geography both affect the climate of Forsyth County. The Appalachian Mountains to the west of the county block cold air masses from the northwest, and elevations in the Piedmont area, ranging from 650 feet to 1,500 feet AMSL, help maintain relatively mild temperatures, with mild, short winters and warm summers. During the warmest month of the year, July, temperatures average between 68 and 88° F, while January temperatures, generally the coldest of the year, average about 32-50°F. The area is also characterized by a humid climate with abundant rainfall, averaging about 44 inches annually.

The growing season for most crops is during the months of April through September, when 54% of the annual rainfall occurs. According to a report published by the State Board of Agriculture in 1896, agriculture was quite successful in this part of the state due to the rich soils and temperate climate. A large portion of the agricultural land was devoted to tobacco and cotton. Corn, grain, apples, pears, peaches, cherries, and grapes were also common crops at the turn of the century.

Floristics

The Piedmont is characterized by the dominance of a pine forest cover, due primarily to three centuries of human land use in the region (Gade et al. 1986:8). Oaks, hickories, and dogwoods also characterize the forests of the Piedmont (State board of Agriculture 1896:37). Oak-pine forests account for most of the forest acreage in the area, although the vegetation has been dramatically altered from the original or natural potential vegetation prior to the intervention of European settlers. Today, loblolly-shortleaf pine forests are abundant and include red oak, white oak, gum, hickory and yellow-poplar trees.

The bulk of the survey tract is forested, with pine and oak dominating. Where the oak-pine or oak-hickory forests are developed, such as on midslopes and even several of the ridgetops, the understory is not dramatic. In several areas of abandoned cultivated land, however, pine forests have developed with a dense

Figure 5. Open ridgetop mixed pine and oak forest in the study area.

understory of small hardwoods and herbaceous vegetation. Similarly dense stands have developed where pine has been clear cut, resulting in almost impenetrable tangles of small hardwood saplings, greenbrier, and blackberry.

In the lowland areas a more mesic forest, including tulip-poplar and beech, are common. Cleared areas in the uplands include only pasture, power line easements, and land being used as a borrow pit. Cleared areas in the lowlands, primarily on Grassy Creek, are in grass.

BACKGROUND RESEARCH

Previous Research

Previous research in the Forsyth County area includes both cultural resource management surveys and longer-term research. An example of the former is an archaeological survey of the Grassy Creek floodplain immediately south of the landfill area conducted by Wake Forest 16 years ago (Abbott and Woodall 1993). Another example is the 1975 test excavations undertaken for the National Park Service at the site of the Guilford County Courthouse (Ward and Coe 1976).

In contrast, research oriented studies in the region have tended to focus on larger sites, typically in the floodplains, and to have been conducted over multiple field seasons. Examples include the Wake Forest research on sites in the Yadkin drainage, such as the Donnaha site (Woodall et al. 1984 and Woodall and Weaver 1990) and the UNC-Chapel Hill research on the Dan, Eno, and Haw drainages (Simpkins et al. 1986 and Wilson 1983).

At least some portions of the research in the general area has been synthesized by these studies, as well as those by Ward (1983) and Dickens et al. (1987), although clearly much of these studies are today dated and probably warrant being revisited. Nevertheless, the upper North Carolina Piedmont is among the best studied of all regions.

These investigations incorporated a review of the files at the North Carolina Office of State Archaeology. No previously recorded sites were found within or immediately adjacent to the project boundaries.

Prehistoric Overview

Overviews for North Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as the one previously mentioned by Ward [1983]). These can be supplemented with a broad range of theses and dissertations produced by students of North Carolina's colleges and universities. Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study area. Figure 6 offers a generalized view of North Carolina's cultural periods.

In the Carolina Piedmont, lithic scatters are the most common type of prehistoric site encountered. Goodyear et al. (1979:131-145) found that sites containing lithic scatters located in the inter-riverine Piedmont were geographically extensive and exhibited little artifact diversity. These sites have been interpreted as:

> limited or specialized activity sites which represent resource exploitation or other distinct functions. Nearly all investigators working in the Piedmont have related these sites to activities involving hunting, nut gathering, and procuring of lithic raw materials (Canouts and Goodyear 1985:185).

Although the vast majority of these sites are located in eroded areas and exhibit little to no subsurface integrity, Canouts and Goodyear (1985) argue that they have analytical value. This value lies in their horizontal rather than vertical dimensions. They argue that:

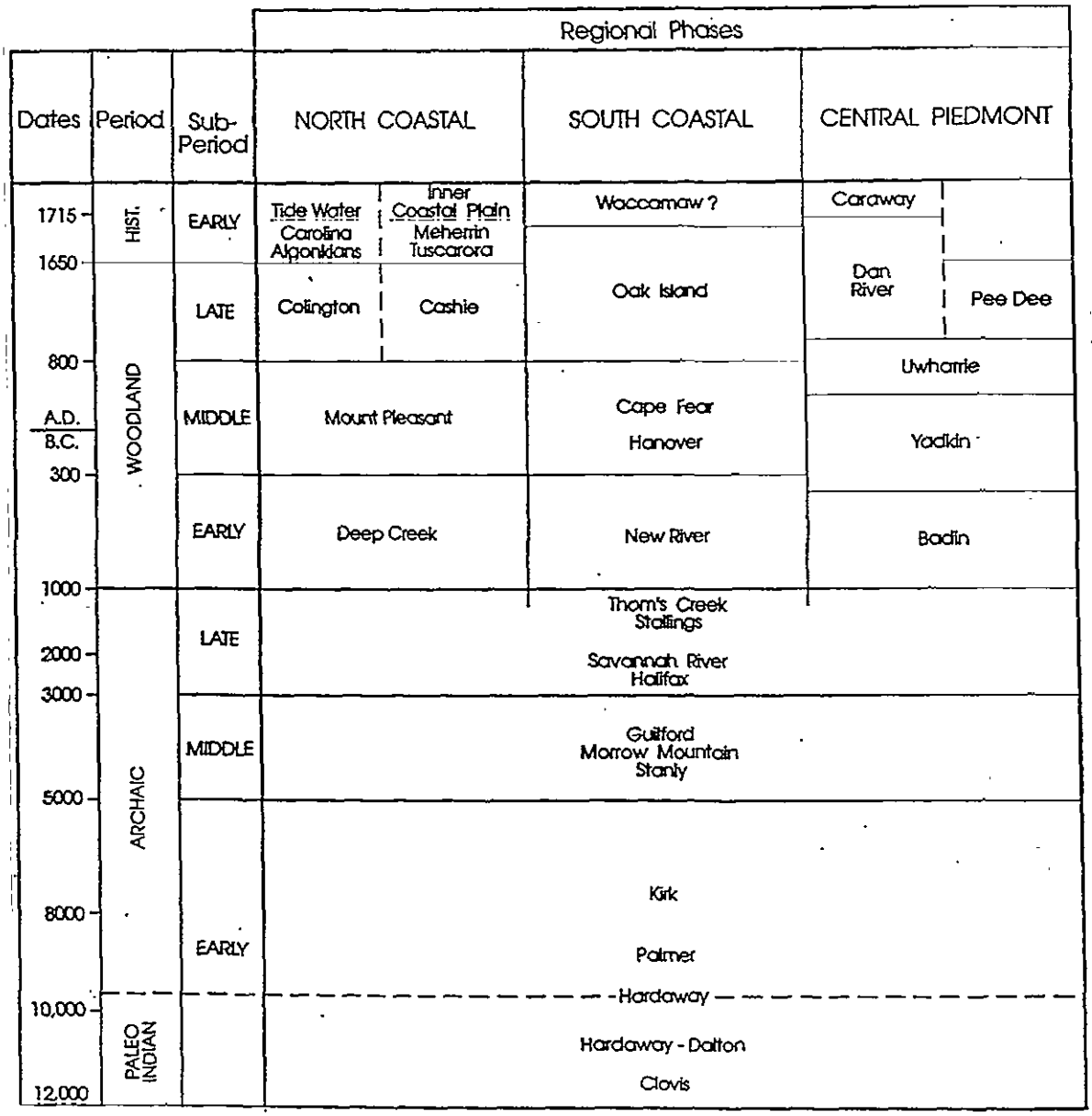

Figure 6. A generalized cultural sequence for the North Carolina coast and piedmont (partially adapted from Coe 1964:Figure 116 and Phelps 1983: Figure 2).

> future investigators of upland sites must effect broad-scale spatial analyses comparable to the temporal analyses effected through excavation of deeply stratified sites. Both endeavors are necessary, and neither is sufficient for the total understanding of Piedmont prehistory" (Canouts and Goodyear 1985: 193).

One observation that Canouts and Goodyear (1985) made is that lithic raw material ratios change through time. For instance, at the Gregg Shoals site in Elbert County, Georgia, the Early Archaic assemblage reflects greater use of non-local cryptocrystalline materials and the Late Archaic, greater use of non-quartz local material (see Tippitt and Marquardt 1981).

Turning to South Carolina, Brooks and Crass (1991) have published a predictive model for historic resources on the Savannah River Site based on survey and archival data. While early pioneers settled on the Savannah River, by the late eighteenth century, settlements had progressed up the larger drainages. As better road systems developed in the nineteenth century, settlement became more road oriented (Brooks and Crass 1991:78-79). This suggests that historic settlement patterning may have changed very little through the county's history.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lancelot projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is rather dated for North Carolina (Brennan 1982; Peck 1988; Perkinson 1971, 1973; cf. Anderson 1990). In spite of this, the distribution offered by Anderson (1992b:Figure 5.1) reveals a rather general, and widespread, occurrence throughout the region.

Distinctive projectile points may include lancoelates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

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[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Some researchers (see for example, Ward 1983:65) suggest that there was a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few, very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produced only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Phelps (1983:25) also notes that the gradual increase from Paleoindian to Archaic in the Coastal Plain seems to peak during the Middle Archaic Morrow Mountain phase. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period.

materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982), Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. (1995) argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sandhills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

Another point of some controversy is the idea that the groups responsible for the Middle Archaic Morrow Mountain and Guilford points were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups which would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the

appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups within North Carolina, the bulk of our data for this period comes from the Uwharrie region.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5,000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts yet, at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Piedmont of North Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery suggestive of influences from northern cultures. In the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[3] This pottery is identified as having very fine sand in the paste with an occasional pebble.[4] Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little more is known about the makers of the Badin wares than is known about those who made New River wares.

The dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper, the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). Although seemingly very different from Badin, Coe has recently commented that there was "a long period of

[3] The ceramics suggest clear regional differences during the Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

[4] Coe, in fact, notes that the Badin paste is very similar to that which characterizes Thom's Creek (Coe 1995:154).

gradual change" (Coe 1995:154), suggesting that we should be expecting a number of intermediate Badin/Yadkin sherds in the Piedmont. It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

The Late Woodland is typically associated with small triangular points such as Uwharrie, Caraway, Pee Dee, and Clarksville (Coe n.d., 1964;49; Oliver 1985; South 1959:144-146). The characteristic pottery is the Uwharrie series which contains crushed quartz (one characteristic of which is its tendency to protrude through the wall of the pottery). This series included cord-marked and net-impressed surface treatments, but in the Uwharrie the stamping was frequently overscraped. Lips were frequently notched or pinched and the rim was often decorated with incised hatch marks. Coe also comments that a consistent characteristic was the use of soft, thick cords for both the cordage and nets which were used to stamp the pottery (Coe 1995:157). The ware was described by Coe in the unpublished Poole site report (Coe n.d.).[5] This pottery appears to represent an evolution from the earlier Yadkin wares (Coe 1995:156) and, like with the transition from Badin to Yadkin, Coe suggests that the evolution of the Uwharrie was also gradual — again suggesting that we should be seeing a variety of intermediate "types."

Of equal interest is a radiocarbon date of A.D. 1610, suggesting that this pottery lasted well into the protohistoric. Coe also notes that "Town Creek and other villages situated along the fall line between the Piedmont and the Coastal Plain seem to have formed a southern boundary for the production and use of Uwharrie ware," which he suggests was made by the ancestors of the Sara, Tutelo, Occaneechi, Saponi, and Keyauwee (Coe 1995:158).

Mississippian

The Mississippian in the North Carolina Piedmont is intimately tied to the Pee Dee. In spite of this Ward only briefly mentions the culture in his synthesis of the North Carolina Piedmont (Ward 1983:63) and until recently one had to piece together ideas and concepts largely from Reid's (1967) typology of the pottery (which does provide a little background) or Ferguson's (1971) examination of what he called the South Appalachian Mississippian, which included central and northern Georgia, the Middle Chattahoochee River Valley, and the Atlantic Coastal Plain. More recently Coe (1995) has filled in at least some of the blanks in Pee Dee research, although much still remains to be explored.

Coe's earliest discussion of Pee Dee focused on Town Creek and he commented that the occupation was "one of the best archaeological records of the movement of a people in the southeast" (Coe 1952:309). The people bearing the Pee Dee culture moved into the Carolina Piedmont from the south, displacing the native Uwharrie culture, and after a relatively brief period of time retreated to the south in the face of the advancing Siouans. Pee Dee has received many dates since first discussed and, through time, has gradually been pushed earlier — first to about A.D. 1450 and most recently, by Oliver (1992) to occupy the span from about A.D. 1100 to 1500.

[5]This study was intended to be published under a monograph series entitled, *University of North Carolina Laboratory of American Archaeology Publications*, but was never completed. The work was conducted in 1936, although the ensuing report is undated.

The most complete information concerning the extensive work at Town Creek comes from Coe (1995) and his co-authors that review lithics, faunal remains, plant materials, human remains, and of course the Pee Dee pottery. Still to be resolved, however, is the relationship of Pee Dee to the range of other complicated stamped materials found in the Carolinas.

Protohistoric and Historic Native American

Whatever simplicity the Carolina Piedmont exhibits during the Woodland or even Mississippian, is shattered in the Proto-Historic and early Historic. Coe observes that:

> Sara and Tutelo pottery evolved into a new style named Dan River; what was thought to be early Occaneechi is presently termed Hillsboro; the Saponi style was named Linwood; and the Keyauwee pottery of this period is called Caraway (Coe 1995:159).

Coe explains that what was previously called Linwood is today classified as Caraway. In spite of this, he distinguishes the two, commenting that the Saponi wares have a different rim treatment and the paddles were carved with steel knives rather than stone tools (Coe 1995:161).

In spite of Coe's desire to "wrap up" everything in the Piedmont in this neat package, the more detailed research of his students suggests the situation is far from clear. For those willing to carefully explore Wilson's 600+ pages on the Carolina and Virginia Siouan groups, there is the tantalizing suggestion that the Hillsboro wares may not even represent a Siouan group. More over he explains, by way of a summary:

> Because of the numerous shortcomings in the ceramic record for the Carolina and Virginia Piedmont, and the lack of precise dates for most of the assemblages, a true synthesis cannot be attempted (Wilson 1983:483).

He does, however, offer some generalizations which help us complete a picture or "snapshot" of the Piedmont during the Historic Period.

For example, Wilson observes that the distribution of Pee Dee and supposedly Siouan forms suggests that the two groups were interacting along the upper Wateree/lower Catawba, as well as the upper Pee Dee and lower Yadkin drainages, although why there is a gap between the two regions is far less clear. Nevertheless, the Pee Dee probably introduced such traits as burnishing and complicated stamping, cazuella bowl forms, and rim applique strips. He goes on to observe that, "it now seems probable that there was a development during the early part of the Late Prehistoric period of ceramics along the Catawba and Yadkin Rivers that came later to be called by the generic name 'Catawba'" (Wilson 1993:484). In contrast, the more northern Dan River assemblages suggest little contact with the Pee Dee.

During the Protohistoric Period there is far less known. The Hillsboro wares, which Coe identifies with the Occaneechi, seem to have a strong resemblance to the ceramics along the Roanoke River at the Fall Line to the northeast. Caraway's abundant complicated stamped pottery suggests a connection with the lower Yadkin, but little else can be observed concerning this far too poorly documented assemblage. Wilson remarks that the "enigmatic" Linwood series is even more poorly understood. Going back to much earlier efforts to identify the ancestral home of Linwood in Virginia, he notes that the issue has never been resolved. Even more importantly, he comments, "identification of the Linwood Series with the Saponi of 1701 should not be taken as a given, especially with the revisions that have been necessary for the other ceramic-ethnic group relationships proposed by earlier researchers" (Wilson 1983:487).

Moving into the Historic Period, Wilson points out that the only information available for the lower Catawba is the fleeting mention of Elkin, mentioned by Coe as being associated with the Catawba Indians of 1700. Yet nothing has ever been published on this assemblage and the only available information is that provided by Wilson from the analysis of a very

small collection. Not unexpectedly, it is dominated by smoothing, burnishing, complicated stamping, and corncob impressing. He suggests that complicated stamping and perhaps some other Lamar-like characteristics continued at least into the late seventeenth century. The shift from this to what is recognized today as "Catawba," cannot be explained.

The only other information for the Piedmont is that from the upper Dan River drainage. There, excavation at two sites has produced the late seventeenth century version of the Dan River ware, which Wilson calls the Oldtown Series (Wilson 1983:615-618). He found that rim folds, present in the earlier Oldtown wares (and frequently associated with the Occaneechi), drop out in the later Oldtown pottery. He admits this disappearance of rim folds may relate to the Occaneechi's loss of power and control over trade routes at the hands of Nathaniel Bacon in 1676. But he notes an equally plausible explanation. It may be that the folded rim originated far to the south, with the Catawba, and that as their focus turned from the north to the south with the establishment of a English settlement in Charleston in 1670, their influence on the northern Piedmont waned.

Although the ceramic sequence for the Dan drainage is pretty well understood, he comments that similar patterns cannot be found in other areas — simply because too little research has been done. Moreover, much of what is available is poorly reported. In summary, Wilson offers a synthesis of Piedmont Siouan ceramics:

> Prior to the Late Prehistoric period, the ceramics of a region probably manifests characteristics derived from the cultures located within discrete river drainages. Interactions would be linear, and the general pattern of change and exchange of ceramic attributes, traits, and modes would follow a general Coastal Plain-Piedmont-Mountain direction. This linear orientation would be tied to communication and information flow up and down river systems, and not between drainages.
>
> With the expansion of the Pee Dee culture up the Wateree and Pee Dee Rivers, the same general pattern of interaction is followed during the Late Prehistoric period for the lower Catawba and lower Yadkin drainages. Information and interaction is most intense up and down the rivers. But, as illustrated by the presence of Pee Dee sherds in Pisgah assemblages of western North Carolina (Dickens 1976:198) and on the Dan River, these influences are also felt across the drainages. In the Piedmont this is manifest by the beginnings of a north-south, and a decline of the east-west, orientation in the ceramics. Contact with the Spaniards in the 1540s and 1560s probably provided an impetus to the changing interaction pattern. Certainly, with the establishment of English colonies in Virginia and South Carolina, the focus for Piedmont Indian interaction shifted decidedly north-south, an orientation which was tied tot he Great Trading Path, the Occaneechi Trail, that cut across river drainages as it ran from the Falls of the Appomattox River in Virginia, to the Fall Line at Augusta, Georgia. This change is clearly evident in the increase of "southern" traits in the ceramics along the Dan River (Wilson 1983:491-492).

In spite of decades of research, the implications of this scenario is far from clear.

Historic Overview

The area which is today Forsyth County was primarily occupied by the Piedmont Siouan Tutelo and

Saponi. Their history, imperfectly understood even today, is briefly recounted by Mooney (1894:37-53) and Rights (1947), with a more recent analysis by Wilson (1983). Exposure to disease and alcohol quickly reduced these groups, so that by only 1728 the remnants of Saponi might be described as "pitiful remnants" (Rights 1947:106).

About this same time it was observed that few English settlers had come to the area and the forests remained, "as tractless as an ocean" (Fries et al. 1976:8). It was not, in fact, until the 1753 purchase by the Moravians of a large tract in Granville County (much of what would later become Forsyth County) that there was any serious settlement in the immediate region (Fries et al. 1976:9). The region was called Wachovia and the first town, Bethabara, was begun in November of the same year. Wachovia, which encompassed nearly 99,000 acres) was described with great delight:

> It has countless springs, and numerous fine creeks; as many mills as may be desired can be built. There is much beautiful meadow land, and water can be lead to other pieces which are not quite so low. There is good pasturage for cattle, and the canes growing along the creeks will help out for a couple of winters until the meadows are in shape. There is also much lowland which is suitable for raising corn, etc. There is plenty of upland and gently sloping land which can be used for corn, wheat, etc. (Brother Joseph Spangenberg, quoted in Fries et al. 1976:11).

A census of the region (comprising the western third of North Carolina) found only 1,116 whites and 54 blacks. Although far from complete, this does emphasize that slavery had not yet begun to spread into the Piedmont (Fries et al. 1976:85).

By 1765 Bethabara had only 65 residents, but the Moravians were successful in petitioning the Governor and Legislature to create a special act, making Wachovia a distinct governing unit — Dobbs Parish — and largely removing the region from the control exercised by the Church of England. Fries et al. comment that this helped make Bethabara a "formidable complex," complete with palisade against Indian hostilities, the congregation house, graveyard, the Single Brothers House, and six other dwellings. There were also business establishments in growing town (Fries et al. 1976:17). In spite of considerable bloodshed around them, the Moravians were secure from Indian attack, their security likely resulting as much from their fair and honest treatment of the Indians as from their stockade.

In 1759 Bethania was established about 3 miles west in an area known as Black Walnut Bottom and Salem, intended to the central town of Wachovia, was begun in 1764. Salem, following Moravian teachings, was self-sufficient and although growth was slow, it was well established within a decade. By 1773, on the eve of the American Revolution, the visitor J.F.D. Smyth observed that "by their unremitting industry and labor [the Moravians] have brought a large extent of wild, rugged country into a high state of population and improvement" (quoted in Fries et al. 1976:28). Outside this Moravian enclave, life was far less appealing and the Piedmont was often a very hostile place.

Throughout the Regulator Movement in North Carolina the Moravians remained loyal to the Governor and the Crown, while engaging in neutrality. As Fries and her colleagues explain, Wachovia was thriving and prosperous and they pursued an isolationist policy. The coming of the Revolution, however, presented a far more complex situation. There were many who coveted the wealth of the Moravians — and who also envied their good relations with the English crown (Fries et al. 1976:34-36). The Moravians were eventually able to negotiate a oath to the new government that was acceptable and they were spared military service — albeit at the expense of a heavy tax. They were, however, affected by the rampant inflation caused by the devalued currency and trade was significantly reduced. Both Tories and Rebels frequently passed through Wachovia, each demanding supplies, usually without payment. Although the nearby

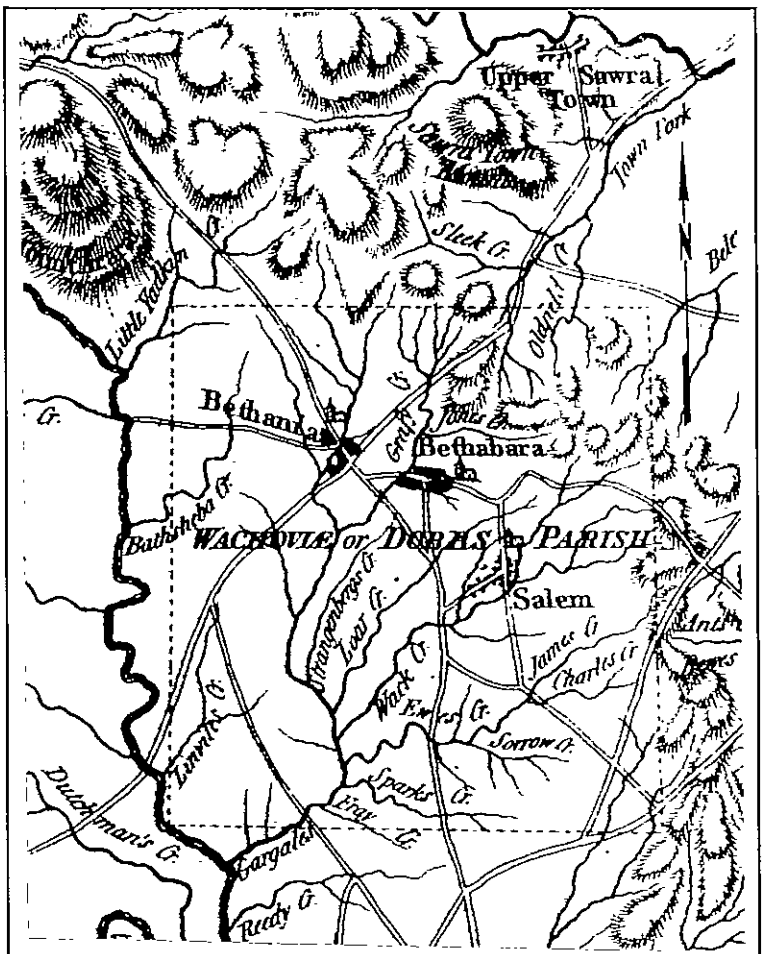

Figure 7. Mouzon's 1775 *An Accurate Map of North and South Carolina*, showing the area of what is today Forsyth County

battle of Guilford Court House was an English victory, it also signaled the beginning of the end for the British in the Southern District. In spite of the war (or perhaps because of it), the Moravians were gradually becoming Americanized according to Fries and her co-authors (Fries et al. 1976:44).

In 1772 there was much movement from Bethabara to the new city of Salem. This new village became a significant mercantile center, attracting a broad range of craftsmen and artisans. Although the agricultural pursuits of the Moravian Brothers focused on foodstuffs, tobacco was an early, if insignificant, crop. It wasn't until 1773 that it began to be processed by the Moravians. By the last two decades of the eighteenth century, however, tobacco had become a significant business, with a manufactory in Salem which produced primarily snuff. The number of tobacco manufactories increased in the early nineteenth century (Fries et al. 1976:96).

Although the Moravians had no ethical problems with owning slaves, they were committed to self-sufficiency, so owning slaves was exceedingly uncommon in the eighteenth century. By the nineteenth century the attitude began to change and this caused considerable upheaval among the Brethren. After decades of spiritual and economic debate, the Moravians abolished all restrictions on slavery in 1847 — about the time that many were first beginning in abolitionist efforts (Fries et al. 1976:106).

Forsyth County was created in 1849, being divided from adjacent Stokes. Acreage just north of Salem was purchased and the town of Winston was laid out as the county seat (State Board of Agriculture 1896:337). In 1850 there were 9,661 whites and 1,353 black slaves (as well as 154 free persons of color). Although a small county, it ranked 14th in wheat production, ninth in rye and oats, seventh in flax, and first in peas and beans (DeBow 1854: 284-288).

Throughout the nineteenth century the region focused on subsistence crops, with relatively little tobacco being grown until the final two decades before the Civil War. Manufacturing was equally important, with Forsyth producing a broad range of good, including shoes, carriages, cotton goods, paper, wagons, and woolen goods (Fries et al. 1976:110-111). In spite of this progress, slavery remained less common in Forsyth than elsewhere to the northeast or even the southwest, with blacks accounting for less than 20% of the population.

Unlike the efforts to remain neutral of the

Revolutionary War, it appears that most of Forsyth's residents supported the Southern Confederacy (Fries et al. 1976:132) and the region supplied three companies of men almost immediately. Like other areas throughout the South, Forsyth County suffered from the hardships brought on by the Civil War. Although no major action occurred in the immediate area during the Civil War, Salem was briefly occupied by Union troops in April 1865 and then again at the war's end by the Tenth Regiment of Ohio Volunteers (Fries et al. 1976:142).

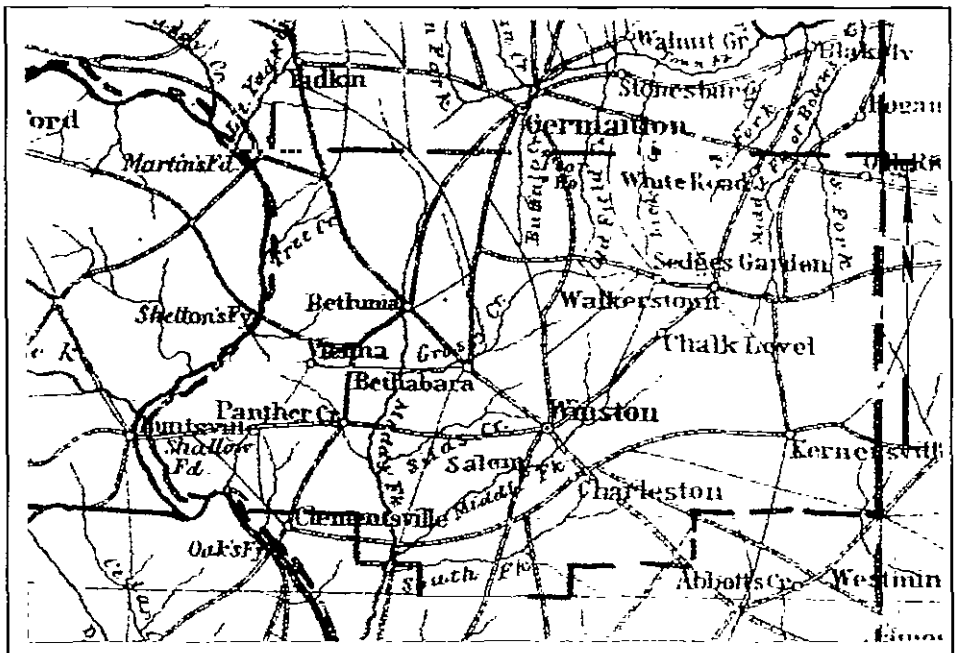

Figure 8. U.S. Coastal Survey map of 1865 showing the Forsyth County area.

Although Forsyth never relied as heavily on slavery as many other regions, after the Civil War there was agricultural stagnation, with the farms growing smaller and being subdivided. Subsistence crops were increasingly unpopular as more farmers turned to tobacco and other non-food crops (Fries et al. 1976:178). Perhaps more damaging to agriculture than the loss of slaves was the increasing competition from industry, which pulled labor away. Much of this activity surrounded tobacco and, in fact, before the end of the nineteenth century Forsyth would boast 22 factories employing 4,000 laborers — all working to produce ten million pounds of chewing tobacco (Fries et al. 1976:180). While not the first in the market, in 175 R.J. Reynolds, a Confederate war-veteran, erected his first Winston factory. By 1888 the company was incorporated as the R.J. Reynolds Tobacco Company, competing with 30 other firms (Fries et al. 1976:183-186).

Just as short-staple cotton production was revolutionized by Whitney's cotton gin, the tobacco industry embarked on a chapter in its history with the introduction of William Cyrus Brigg's cigarette-making machine. Producing 60 cigarettes per minute a packer was also quickly added — stimulating, if not actually permitting, the growth of Winston-Salem's cigarette industry (Fries et al. 1976:187). At the end of the nineteenth century the county's four tobacco warehouses sold more than 15 million pounds annually. There were 25 leaf-houses, three cigar factories, and four cigarette factories (State Board of Agriculture 1896:338). As tobacco increased in importance, so too did the black population, coming into the region to work as unskilled labor in the factories. By 1890 the population of the county had grown to about 30,000, with 4,000 being African Americans.

In 1913 Winston was consolidated with Salem, becoming Winston-Salem and the town remained the largest in North Carolina until the 1930 census. Although tobacco continued to be the lifeblood of the community, there were both other industries and agriculture. In fact, Forsyth County by mid-century boasted an average corn yield of 50 bushels per acre, while the rest of the state could report an average of

only 20 bushels per acre (Fries et al. 1976:244). Forsyth, by 1925, was not only the world's largest manufacturer of tobacco products, it was the county's largest manufacturer of knot goods, the South's largest manufacturer of woolen goods, and the region's largest manufacturer of wagons (Fries et al. 1976:145).

METHODS

Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100-foot intervals along transects also placed at 100-foot intervals with shovel tests expected to be 1.0-foot in diameter and 1.0-1.5-feet below the surface, or to subsoil. In areas considered to have a low probability for the recovery of archaeological sites, shovel tests were excavated at 200-foot intervals. In areas of obvious disturbance, (such as the area being borrowed), standing water, wetlands, and slope of greater than 15%, no tests would be excavated (Figure 9). All soil would be screened through ¼ inch mesh, with each test numbered sequentially. All cultural remains would be collected, except for shell, mortar, and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

During the survey it was noted that portions of the project areas had moderate to excellent surface visibility, permitting a pedestrian survey to be performed. When sites were identified either by shovel testing or pedestrian survey, further shovel tests would be excavated to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at either 25 or 50-foot intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of North Carolina Office of State Archaeology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

Site Evaluation

Sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final

Figure 9. View of borrowed area in survey tract to the southeast.

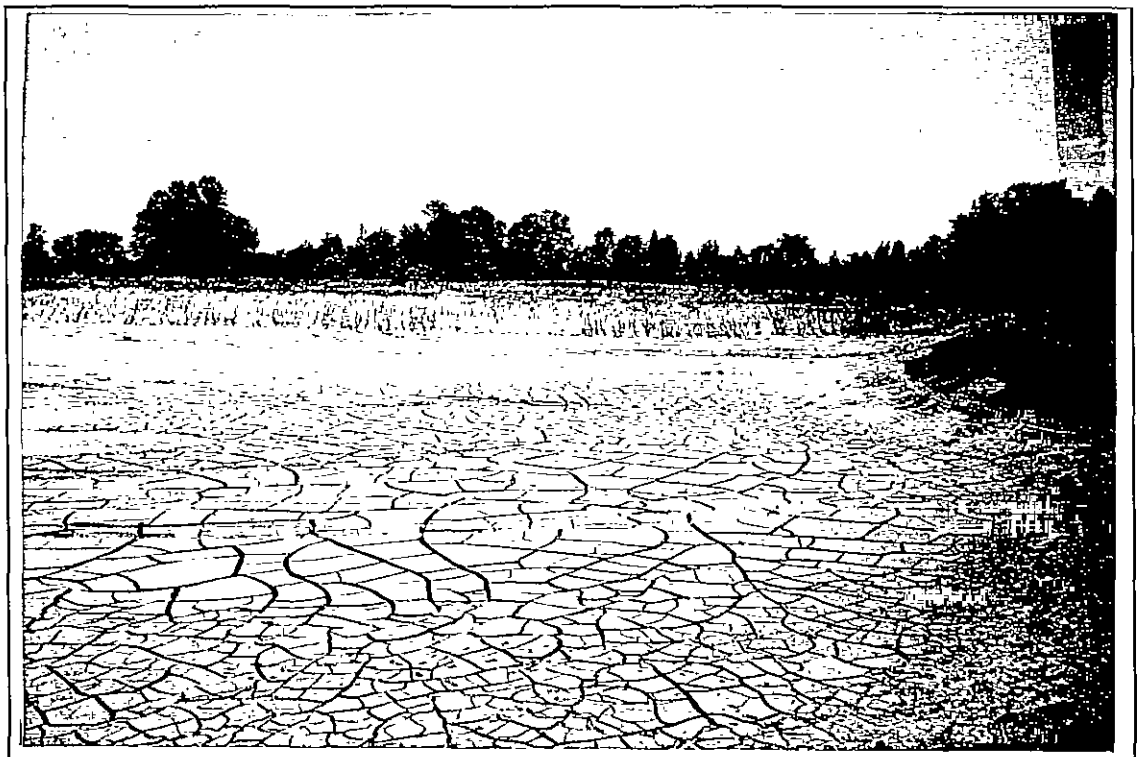

Figure 10. View of borrowed pit area to the southwest.

determination is made by the Office of State Archaeology.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 30 (Townsend et al. 1993) provides an evaluative process that contains five

steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site might be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the North Carolina Office of State Archaeology, the closest regional repository. The site forms for the identified archaeological sites have been filed with the North Carolina Office of State Archaeology. Field notes and photographic materials have been prepared for curation using archival standards and will be transferred, along with artifacts recovered from all sites, to the North Carolina Office of State Archaeology as soon as the project is complete. Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains.

RESULTS

Introduction

The intensive shovel testing and pedestrian survey identified twenty sites in the 260 acre tract for the proposed Hanes Mill Landfill expansion (Figure 11). Of these twenty sites, none are considered potentially eligible for inclusion on the National Register of Historic Places.

Identified Sites

Site 31FY1065 is a scatter of lithics situated on a ridgetop with an elevation of 930 feet AMSL that slopes steeply to the north towards a finger of Grassy Creek in the northern portion of the survey tract. The site was located during a pedestrian survey of a cleared area and erosional gully underneath two powerline towers, approximately 900 feet south of the Grassy Creek finger to the north, and 1200 feet west of Grassy Creek. The nearest road, Ziglar Road, is 1100 feet north of the site. The site's central UTM coordinates are N4005100 E563120.

After making a general collection of the site and determining the surface scatter boundaries, 22 shovel tests were excavated in an undisturbed forested area west and southwest of the surface scatter (Figure 12). None of these shovel tests produced artifacts, indicating that the site has been exposed through maintenance of the powerlines and erosion of the ridgetop. Artifacts recovered from the general surface collection, which spanned an area measuring 70 feet by 120 feet, include two potentially used rhyolite flakes, two primary rhyollite flakes, a secondary rhyolite flake, three interior rhyollite flakes, two primary quartz flakes, two secondary quartz flakes, and four quartz shatter.

Site 31FY1065 is located on Hiwasse clay loam soils. In general, these soils have an A horizon in the upper 0.8 foot below the surface of reddish-brown (5YR3/4) loam, overlying a dark red (2.5YR3/6) clay B21t horizon with a depth of up to 32 inches. While shovel testing in the forested areas suggested that the A horizon was depleted by only a few inches in some cases, the hard-pan B horizon soils were evident on the surface of the site, suggesting erosion on the exposed ridgetop.

The data sets present at the site include 16 non-diagnostic lithics. In order to be considered potentially eligible, a site must have the ability to address significant research questions. This ability generally requires that a site have diagnostic artifacts that can help understand the site's chronology, subsurface artifacts and features, and ethnobotanical and faunal remains. Site 31FY1065 does not contain any of the elements necessary to address significant research questions. It is unlikely given the eroded nature of the site, the previous powerline construction, and the lack of subsurface artifacts that this site will produce further artifacts or features that will have the ability to address significant research questions. For these reasons, we recommend 31FY1065 as ineligible for the National Register. No further management work is recommended.

Site 31FY1066 is another lithic scatter on the same ridgetop as 31FY1065, but 500 feet to the south. This site was also located during a pedestrian survey of the cleared area beneath power lines. The elevation of the ridgetop is 930 feet AMSL. The central UTM coordinates are N4004980 E563120. The nearest water source is a finger of Grassy Creek, approximately 1300 feet north of 31FY1066. Ziglar Road is located 1600 feet north of the site.

A general surface collection was made of the area and we determined that the surface scatter covered an area measuring 110 feet by 100 feet. Most of the surface scatter was located along the dirt road and in areas with no vegetation (Figure 12). Seven shovel tests were excavated in a small area of young pines

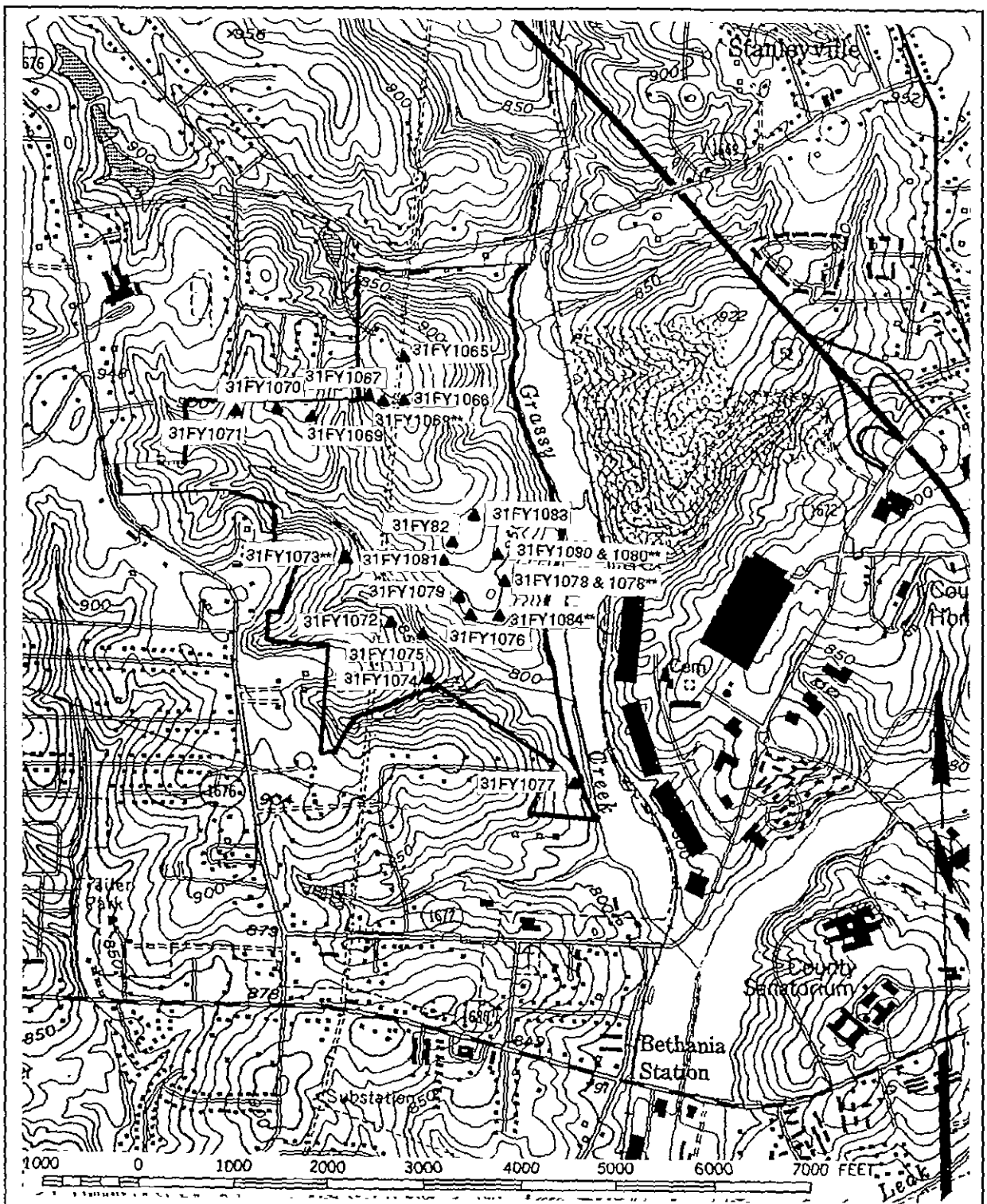

Figure 11. Sites identified on the Hanes Mill Landfill Expansion tract (base map is USGS Rural Hall 1951R94, 1:24,000).

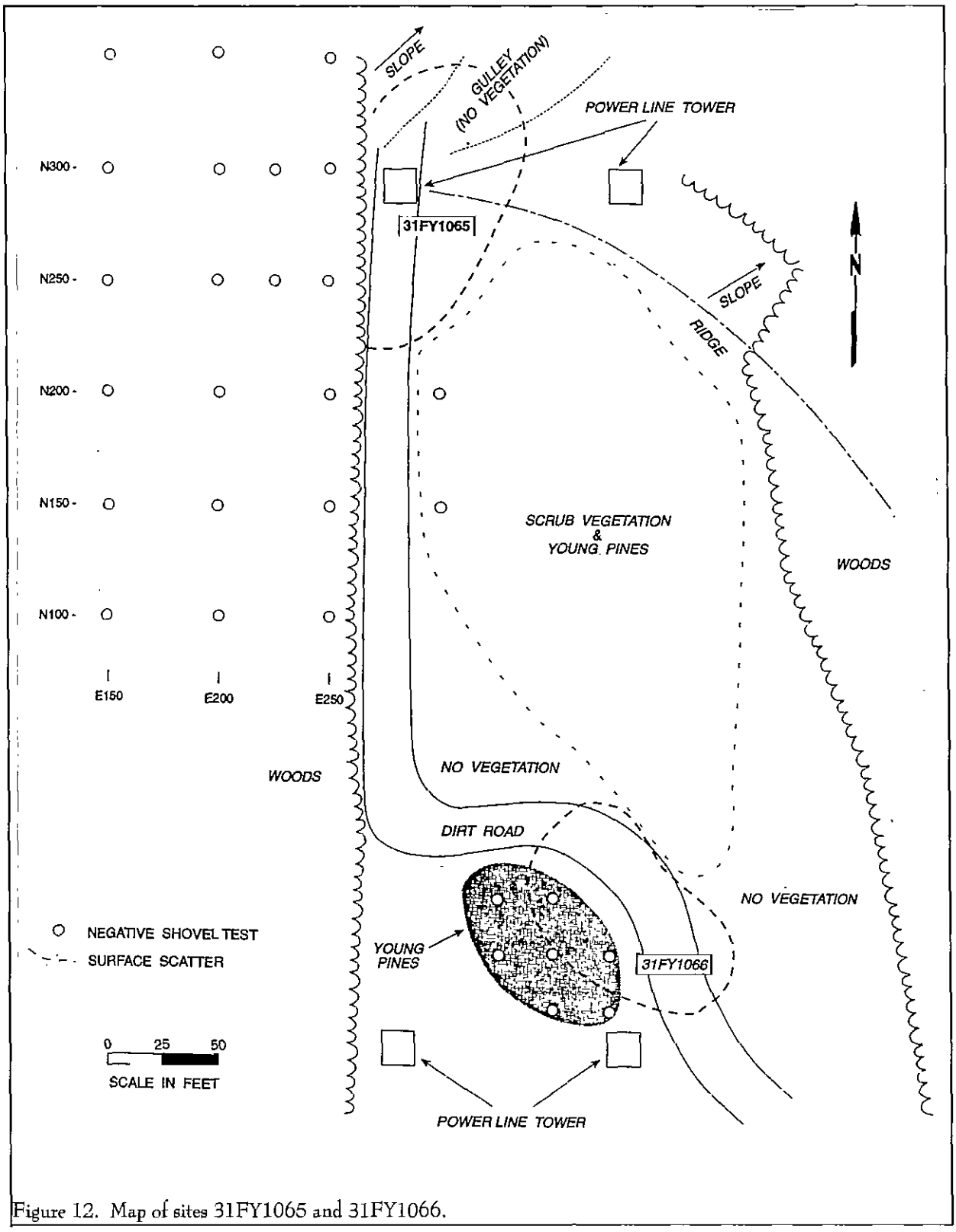

Figure 12. Map of sites 31FY1065 and 31FY1066.

where some of the surface artifacts were located. Artifacts collected from the surface include two primary quartz flakes, three interior quartz flakes, a secondary rhyolite flake and an interior rhyolite flake.. Shovel tests were not placed in the area containing scrub vegetation and young pines because the B horizon soils were visible at the surface and were hard pan. The shovel tests produced no artifacts.

Site 31FY1066 is located on Hiwasee clay loam with two to six percent slopes. As in the case of site 31FY1065, the B horizon soils, generally dark red (2.5YR3/6) clay up to 32 inches, were visible on the much of the surface of the site. Shovel tests did reveal a few inches of A horizon soils, reddish-brown (5YR3/4) loam, but were not the expected seven inches. The depletion of the A horizon is most likely due to construction and maintenance of the power lines and subsequent erosion of the exposed A horizon.

As mentioned above, a site must have the ability to address significant research questions in order to be considered potentially eligible for the National Register. In general, a site must have diagnostic artifacts, a sufficient quantity of artifacts, intact features, and materials that can address subsistence, such as ethnobotanical and faunal remains. Site 31FY1066 contains only non-diagnostic lithics, and no subsurface remains. The soils at the site are also very eroded, with little to no A horizon soils present. This indicates that the site is superficial and will not produce the data sets or have the integrity to address significant research questions. For these reasons, we recommend 31FY1066 as not eligible for the National Register. No further management work is recommended.

Site 31FY1067 is a prehistoric lithic scatter located on a forested ridgetop in the western portion of the tract, near the boundary fence which separates the tract from a residential area. The ridge slopes steeply to the southeast and climbs again to another ridgetop only 300 feet to the east. A deep erosional gully is situated at the lowest pint of the down slope. The area near the fence has very little vegetation, no trees, and at least 75% ground visibility. The elevation of the ridgetop is 920 feet AMSL. The site's central UTM coordinates are N4404930 E562970.

Site 31FY1067 was located during a pedestrian survey of the area near the fence. A quartz biface, two primary quartz flakes, five secondary quartz flakes and a quartz shatter were collected from the surface. Sixteen shovel tests were placed in the area of the surface collection and the surrounding wooded area (Figure 13). Only one shovel test was positive, N200 E200, which produced a rhyolite shatter.

When compared to the general soil description for Hiwassee loam with two to six percent slopes, the shovel tests indicate that the A horizon has been depleted or completely eroded, especially in the area with no vegetation near the fence. Hiwasse loams generally have an A horizon of reddish-brown (5YR3/4) loam with a depth of up to 7 inches, overlying a dark red (2.5YR3/6) clay B21t horizon with a depth of up to 32 inches. The B horizon near the fence was exposed at the surface, with shovel tests containing five to one inches of A horizon. The construction of the fence most likely aided in the erosion of the soils on the ridgetop, which are extremely susceptible to erosion in the Piedmont.

As has been discussed above, a site must have varied and numerous diagnostic data sets to address research questions, and have good integrity to be considered potentially eligible for the National Register. Site 31FY1067 contains only one type of data, non-diagnostic lithics, in a setting which indicates that the site has poor preservation. It is unlikely that this site will produce further artifacts and data sets necessary to address significant research questions. For these reasons, we recommend 31FY1067 as not eligible for inclusion on the National Register of Historic Places. No further management work is recommended.

Site 31FY1068** is a scatter of historic artifacts located approximately 300 feet west of site 31FY1067. This site sits on a forested ridge that slopes steeply to the east. Like site 31FY1067, this site is located near the fence that separates the tract from a residential area. There is also little vegetation near the fence, with ground visibility greater than 75%. A pile of deadfall was located just south of the site at

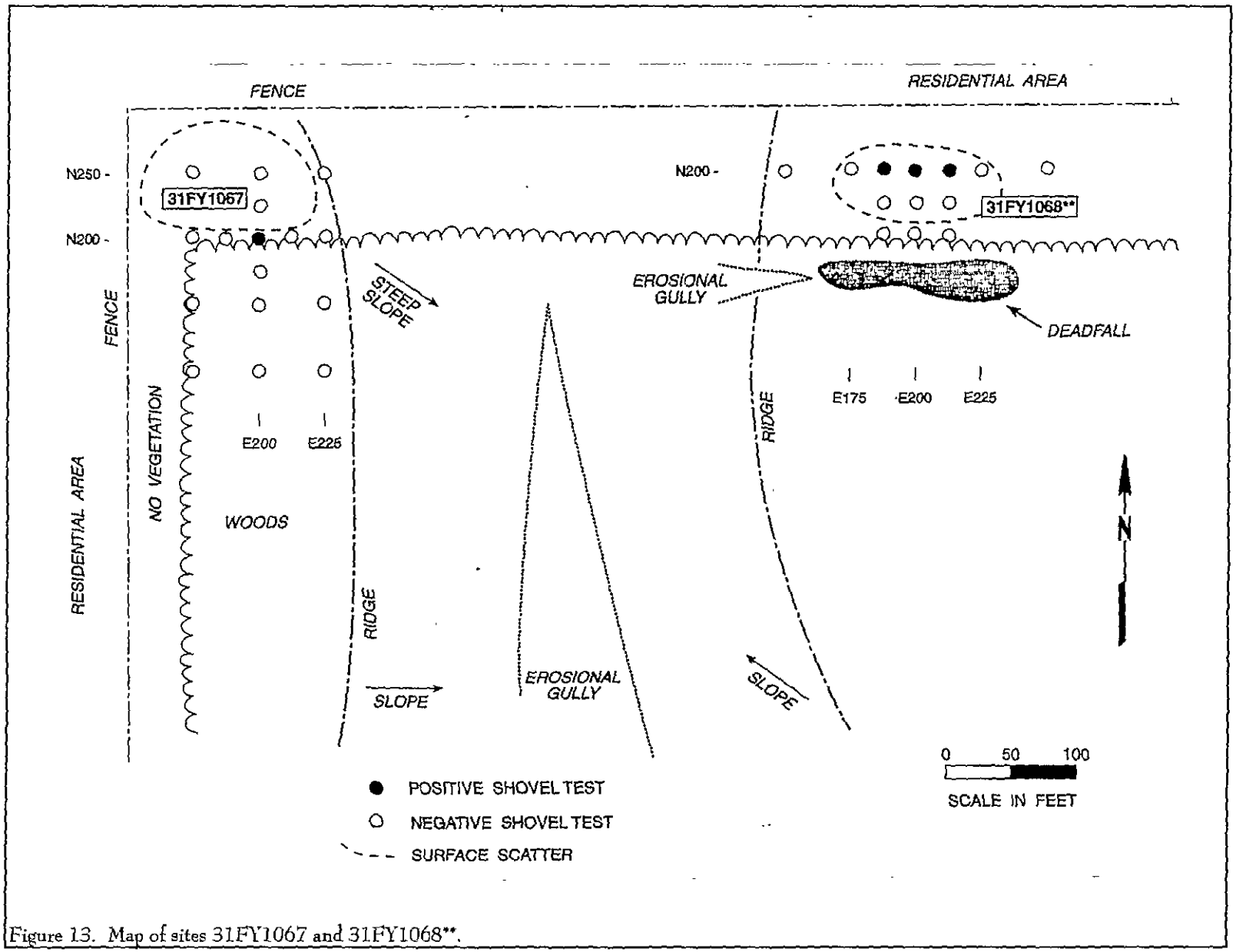

Figure 13. Map of sites 31FY1067 and 31FY1068**.

the tree line. An erosional gully is located southwest of the site and west of the deadfall. Elevation on the ridge is 940 feet AMSL. The nearest sources of water are a finger of Grassy Creek, located 1300 feet north of the site, and Grassy Creek located 1500 feet east of the site. The central UTM coordinates are N4004930 E563020.

The site was located during a pedestrian survey of the area near the fence. After making a general surface collection of two milk glass lids and three pocket watch parts, 13 shovel tests were excavated, beginning with an east-west line of tests concentrated in the area of the surface collection (Figure 13). Three of these tests were positive and one artifact was recovered from each, including a window glass fragment, and two clear glass fragments.

Similar to the other sites in this area, 31FY1068** is located on Hiwassee loam. The A horizon, discussed above, was absent in the area near the fence with no vegetation. Shovel tests conducted just north of the deadfall had only two to three inches of A horizon. Like many ridges in the Piedmont, the soils are very eroded.

Data sets recovered from 31FY1068** include kitchen, architecture, and personal group artifacts, representing important and significant artifact groups. However, only eight artifacts were recovered from the site. While the subsurface artifacts recovered from shovel testing indicates that the site has some integrity, the soils in this area are very eroded, with an absence of the A horizon in some areas of the site. The small number of artifacts recovered does not permit a discussion of significant research questions that the site may be able to address. Based on the eroded soils, it is unlikely that this site will produce artifacts in sufficient quantity to answer significant research questions. For these reasons, we recommend site 31FY1068** as not eligible for inclusion on the National Register. No further management work is recommended.

Site 31FY1069 is a small lithic scatter situated on a ridge near the fence that separates the tract from the residential neighborhood. The area is forested with pines and oaks and a dirt road runs south through the area. The nearest water source is a finger of Grassy Creek located 1000 feet to the south. The area south of the site gradually slopes down to this stream for about 800 feet when the slope increases dramatically. The central UTM coordinates are N4004880 E562850.

This site was located while walking the dirt road to access this portion of the tract. Two secondary quartz flakes were collected from the surface in an area that measured 60 feet by 25 feet. Shovel tests were placed in the area of the surface collection and on the east and west sides of the road (Figure 14). Two positive shovel tests on the west side of the road produced an interior rhyolite flake (N200 E200) and a primary rhyolite flake (N200 E175).

The soils in this area of the tract also belong to the Hiwassee loam series. Although the A horizon was depleted in the road, the shovel tests revealed very little depletion of the A horizon.

Site 31FY1069 contains only lithic data sets, with a total of four artifacts. The soils in the area away from the road indicate that there is likely to be good preservation. However, the sparsity of artifacts does not permit a discussion of significant research questions, and it is unlikely that the site will produce more data sets. For these reasons, we recommend the site as not eligible for the National Register. No further management work is recommended.

Site 31FY1070 is a small lithic scatter located in a horse pasture at the far western part of the tract. Two fences separate the tract from the residential area and the horse pasture from the remainder of the tract. The horse pasture is covered in light grass, with ground visibility between 50 and 75%. The horse pasture sits on a ridge that slopes south towards a finger of Grassy Creek, approximately 500 feet to the south of the site. On the east side of the fence, the area is wooded with pines and mixed hardwoods. Closer to the creek, the vegetation includes hardwoods and a thick underbrush of wetland vegetation. The central UTM coordinates are N400870 E562620.

The site was located during a pedestrian survey

of the pasture. Four quartz flakes were located in an area measuring 1,225 ft^2 (Figure 15). No shovel tests were dug in the pasture out of concern for the safety of the horses, which were grazing in the pasture at the time of the survey.

This site is also located on Hiwassee loam soils. The B horizon, a dark red (2.5YR3/6) clay, was evident at the surface of the soil.

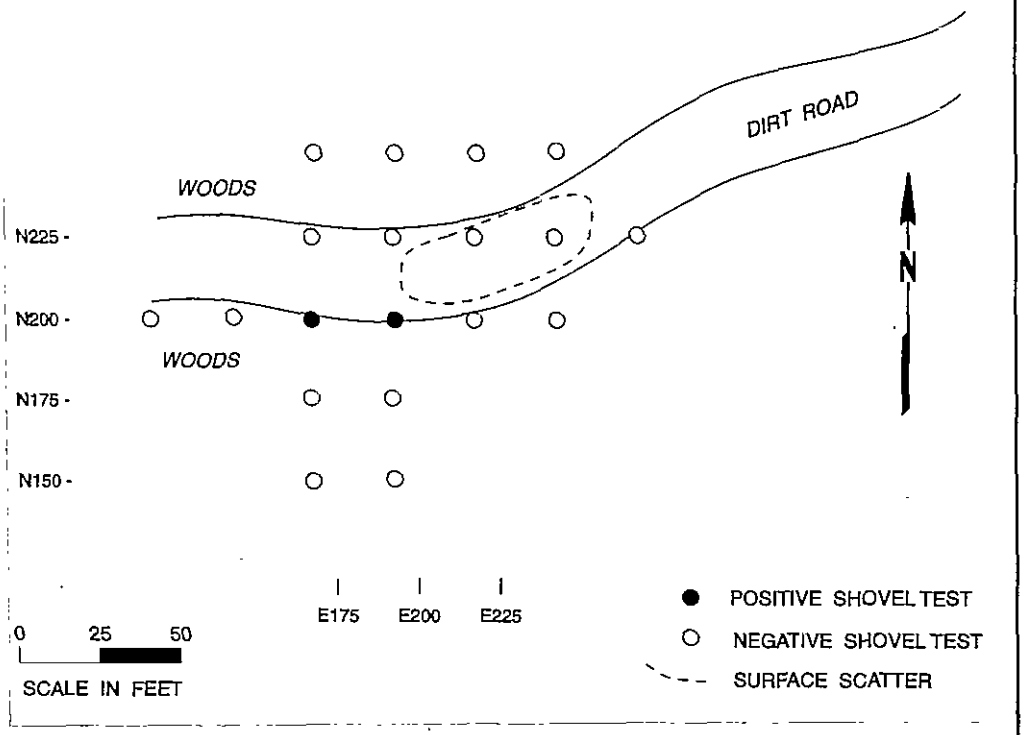

Figure 14. Map of site 31FY1069.

The four non-diagnostic lithics recovered from the site are too few in number to suggest significant research questions. Based on the eroded soils, and the small number of subsurface remains at other sites in the tract, it si unlikely that this site will produce data sets with the potential to address significant research questions. For this reason, we recommend the site as not eligible for inclusion on the National Register of Historic Places. No further management work is recommended.

Site 31FY1071 is a lithic scatter located n on an east slope face of a ridge near the fenced tract boundary in between sites 31FY1070 and 31FY1069. The central UTM coordinates are N4004900 E562700. The nearest water source, a finger of Grassy Creek, is located 800 feet south of the site. The area near the fence has no vegetation, resulting in ground visibility of greater than 75%. Vegetation in the nearby forested area consists of pines and mixed hardwoods.

The site was found during a pedestrian survey of the area near the fence. A quartz biface fragment, two quartz secondary flakes, and two quartz interior flakes were collected from an area measuring 80 feet by 40 feet. Eleven shovel tests placed in two rows through the surface scatter and into the wooded area produced no artifacts (Figure 16).

This site is also located on Hiwassee loam. As

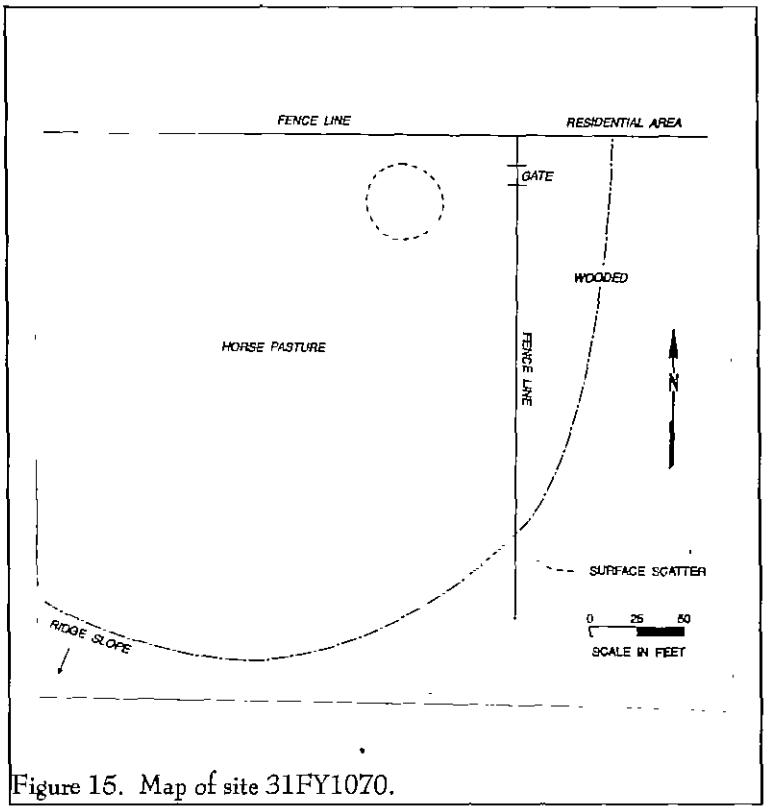

Figure 15. Map of site 31FY1070.

the lack of diagnostic material does not permit a discussion of significant research questions. The eroded soils and surface nature of the site suggest that the site will not produce data sets with the potential to address significant research questions. Site 31FY1071 is recommended as not eligible for inclusion on the National Register of Historic Places and no further management work is recommended.

Site 31FY1072 is a small lithic scatter located along a dirt road on the east slope face of a ridge 300 feet southwest of a finger of Grassy Creek. The dirt road is maintained as a access road for the powerlines located just west of the site. The vegetation on the east side of the road consists of low secondary scrub growth, and on the west side of the road, thick briar patches. The elevation on the slope face is 860 feet AMSL. The central UTM coordinates are N4004220 E563040.

As was the case with other sites on this tract, the A horizon soils were completely eroded, leaving only the B horizon soils at the surface.

The only data sets produced by 31FY1071 include five non-diagnostic lithics. This small number of artifacts and

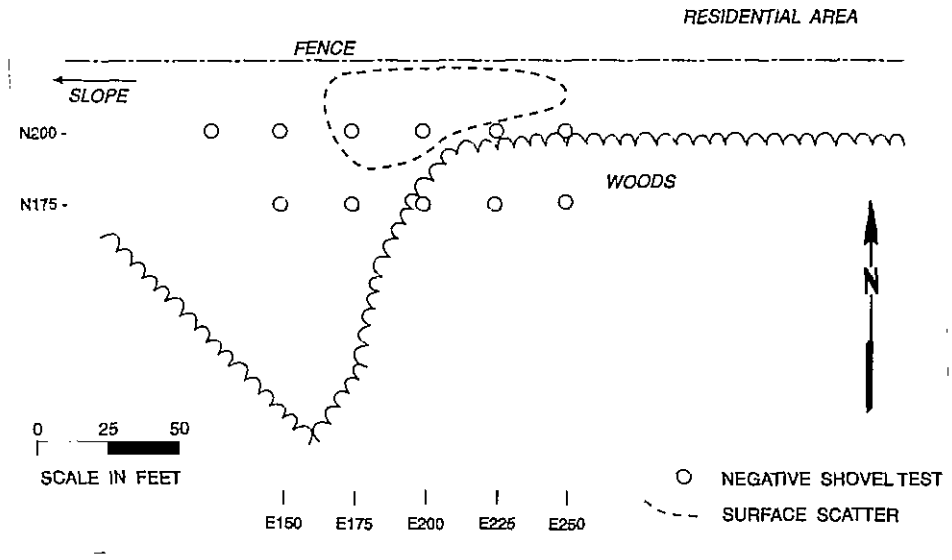

Figure 16. Map of site 31FY1071.

The site was concentrated on the east side of the road in an area measuring 15 by 55 feet. A general surface collection produced a primary quartz flake and three interior quartz flakes. A series of seven shovel tests were excavated at 25 foot intervals on the east side of the road in an area of moderate slope (Figure 17). The slope increases dramatically at the point where the northernmost shovel test was excavated.

Pacolet clay loam with 15 to 45% slopes, on which the site is located, is a well-drained soil. The A horizon consists of six inches of dark yellowish-brown (10YR4/4) fine sandy loam over a B1 horizon of yellowish-red (5YR5/6)sandy clay loam. At site 31FY1072, the A horizon in the road is obviously completely eroded, while the shovel tests showed at least three inches of A horizon.

The data sets at 31FY1072 include only four non-diagnostic lithics. These artifacts are too few in number and chronological information to suggest significant research questions. In addition, the lack of subsurface artifacts suggests that this site will not produce sufficient artifacts, features, or other archaeological materials with the potential to address significant research questions. For these reasons, we recommend 31FY1072 as not eligible for inclusion on the National Register of Historic Places. No further management work is recommended.

Site 31FY1073** is situated on the west slope face of a ridge with an elevation of 870 feet AMSL. The site was first located on a dirt road as a scatter of historic artifacts. The dirt road runs roughly east-west from the power line maintenance road to the

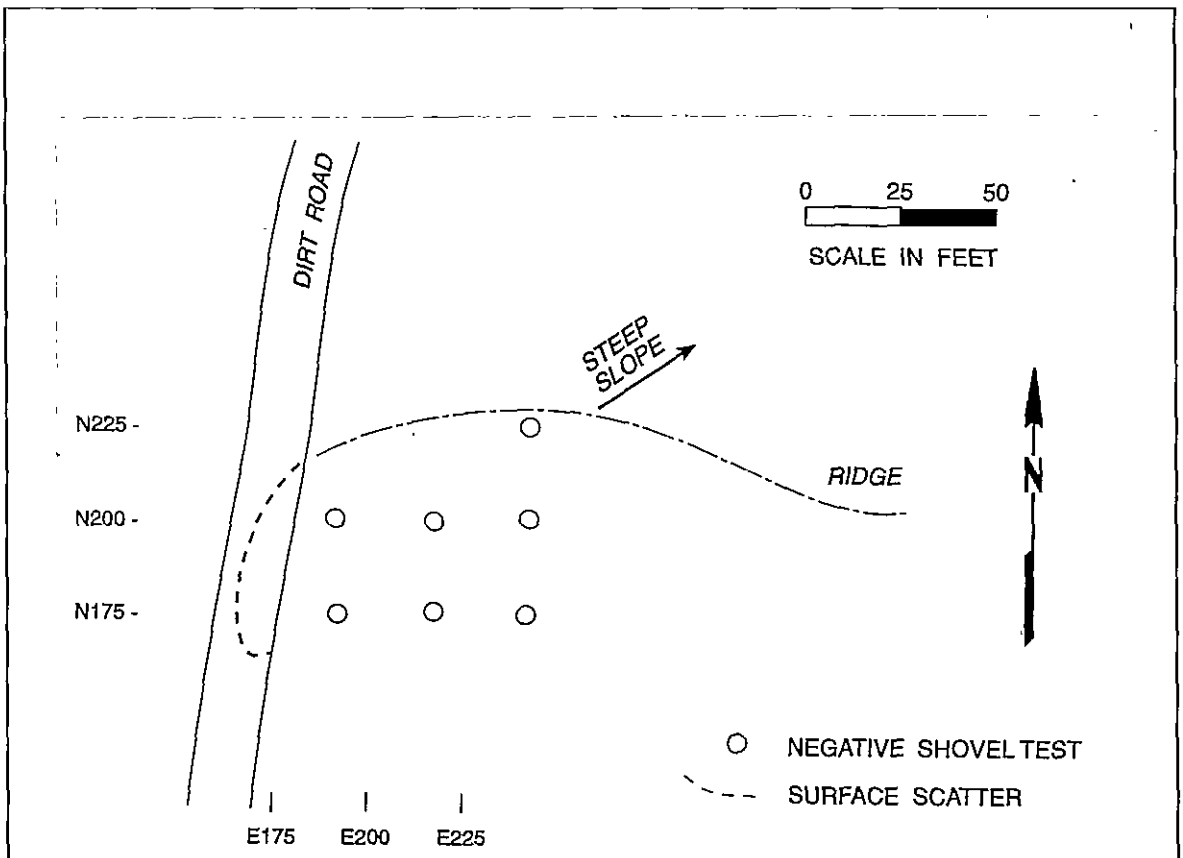

Figure 17. Map of site 31FY1072.

fenced boundary for the tract, which is located 500 feet west of the site. In the area of the site, the vegetation consists of mixed pines and hardwoods with a scrub understory on the north side, and on the south side, vegetation consists of a large cedar tree, vinca (or periwinkle) around the cedar tree, mixed pines and hardwoods, and low scrub brush. The nearest water source is a finger of Grassy Creek, located 300 feet to the north. The central UTM coordinates are N4004460 E562900.

A general surface collection was made of the historic scatter and it was found to cover an area along the road measuring 350 feet by 20 feet. A total of 21 artifacts were collected from the road's surface and include brown glass, amethyst glass, two aqua glass fragments, clear glass, milk glass, ten whiteware fragments, two pearlware fragments, two gray salt glaze stoneware fragments, and a brown salt glaze stoneware fragment. Shovel tests were first placed at 50-foot intervals on the north and south side of the road to determine the possible subsurface location of the site. This testing revealed no subsurface artifacts on the north side of the road, while four positive shovel tests were excavated on the south side of the road in the vicinity of the cedar tree (Figure 18). Shovel test N175 E150 contained the highest number of artifacts, including three clear glass fragments, a whiteware fragment and two nails. N200 E150 produced two clear glass fragments. N200 E200 contained two porcelain fragments, and N200 E225 produced three whiteware fragment and a red earthenware fragment with a brown lead glaze. Based on the production and mean ceramic dates of the whiteware and pearlware, it is likely that the site was occupied in the late nineteenth century and perhaps early twentieth century. No architectural remnants were located during the survey.

Site 31FY1073** is located on Hiwassee clay loam with six to ten percent slopes. In general, the A horizon consists of seven inches of reddish-brown (5YR3/4) loam. The B horizon, a dark red (2.5YR3/6) clay, occurs down to 32 inches below the surface. Shovel tests revealed an A horizon that ranged from two to ten inches below the surface in the area of the site, suggesting that there has been erosion and accumulation of A horizon soils in this area.

A total of 35 artifacts were recovered from the site, representing the kitchen and architecture artifact groups. The ceramic data sets indicate that the site was occupied in the late nineteenth and early twentieth century. While there are a number of pertinent research questions that late nineteenth and early twentieth century sites can address, such research questions would require a much broader range of data then we have found at 31FY1073**. For example, to explore site function, it is necessary for the site to yield more artifacts, features, and material suitable for dating. It is also necessary for the site to exhibit, at the very least, some degree of intra-site patterning, perhaps concentrations of nails or other construction hardware reflected in surface collections or shovel testing density. While some of these data sets are present, they are too few in number to exhibit intra-site patterning. It seems very unlikely that the site has the ability to provide additional data sets necessary to address these questions. Although the site has both surface and subsurface remains, the lack of any architectural remnants or brick suggests that there is very little potential for recovering in situ remains. For these reasons, site 31FY1073** is recommended as not eligible for the National Register. No further management work is recommended.

Site 31FY1074 is a small lithic surface scatter located on a ridgetop next to the boundary fence in the southern portion of the tract. The ridgetop has an elevation of 850 feet AMSL and slopes steeply to the southeast approximately 100 feet east of the fence.. The nearest source of water is a large pond located 300 feet to the east. The wooded area at the site consists of hardwoods and low scrubby secondary growth, while the area near the fence has no vegetation and at least 75% ground visibility. The central UTM coordinates are N4004020 E563200.

The site was located during a pedestrian survey of the cleared area near the fence. A general surface collection of seven artifacts determined that the surface scatter covered an area measuring 150 feet by 15 feet. A rhyolite Gypsy stemmed point, three secondary quartz flakes, and three interior quartz flakes were collected. The Gypsy stemmed point measures 32 m.m. in length and 18 mm in width, and based on Oliver's (1981:171) research, falls in the accepted

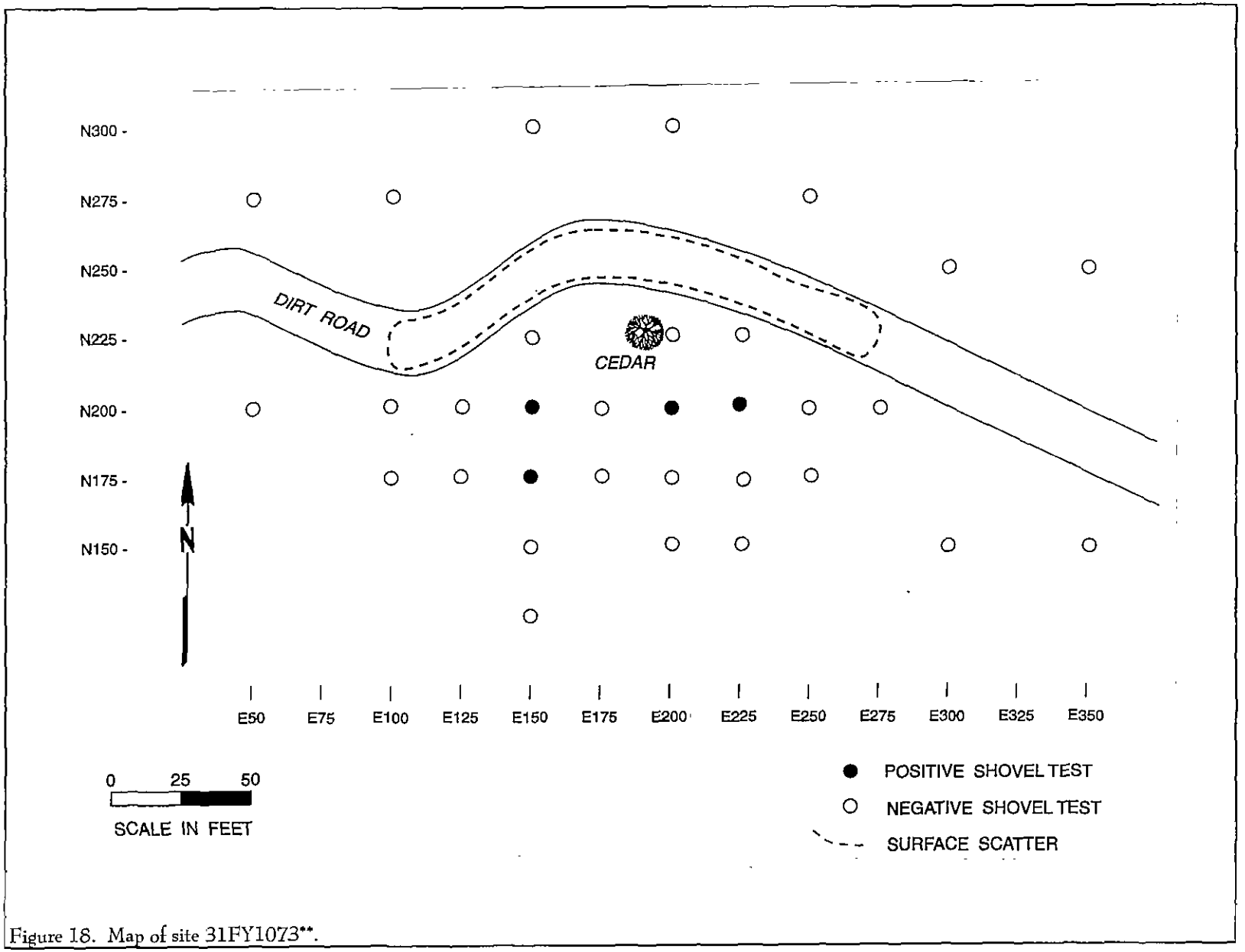

Figure 18. Map of site 31FY1073**.

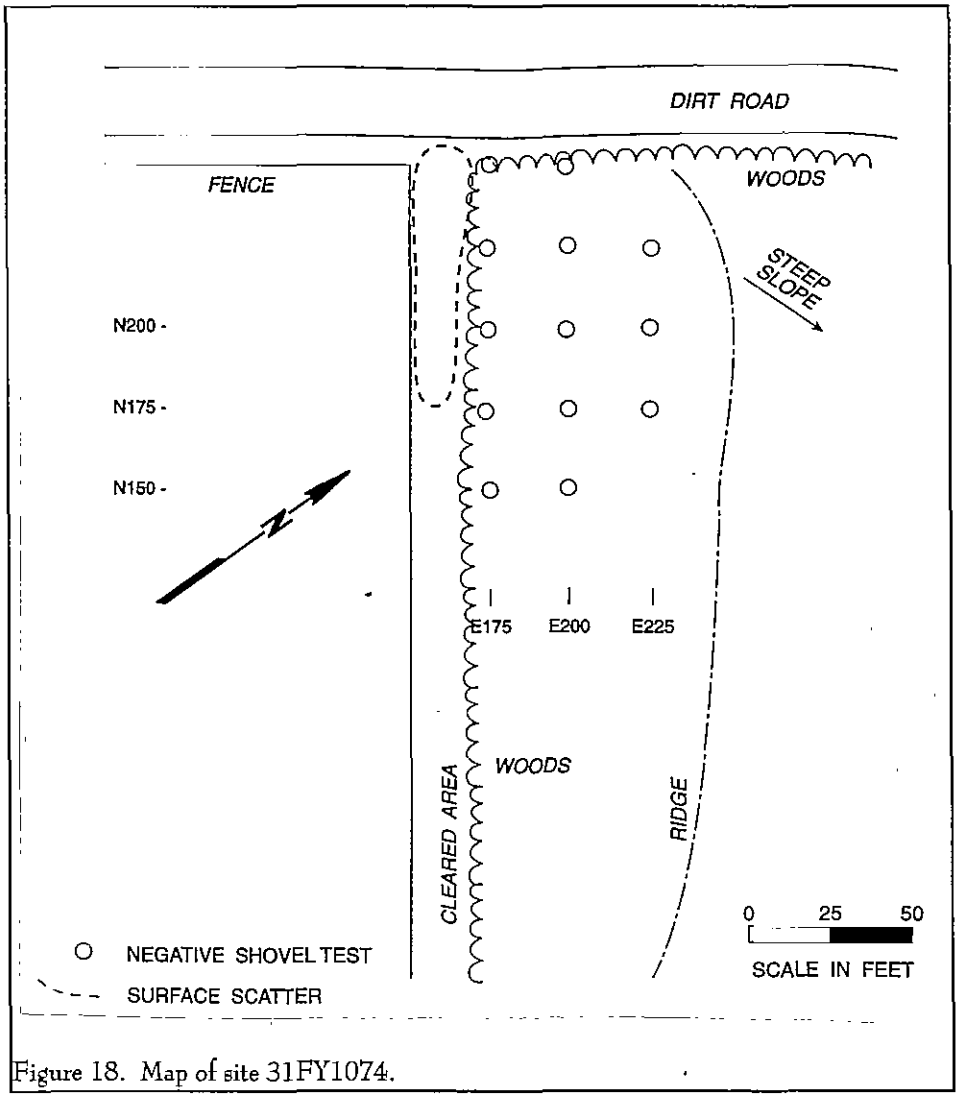

Figure 18. Map of site 31FY1074.

range for Gypsy stemmed points. Thirteen shovel tests were excavated in the wooded area adjacent to the surface scatter to determine the extent of the site (Figure 19). These shovel tests produced no artifacts.

The site is located on Pacolet clay loam with 15 to 45% slopes, on which the site is located, is a well-drained soil. The A horizon consists of six inches of dark yellowish-brown (10YR4/4) fine sandy loam over a B1 horizon of yellowish-red (5YR5/6)sandy clay loam. Shovel tests at the site indicate that the soils have eroded slightly by about two inches. However, the B horizon was visible on the surface of the road. This erosion of the A horizon is probably due to the construction of the fence and natural erosion of the ridgetop.

The data sets present at 31FY1074 include six non-diagnostic lithics and a Late Archaic point, all recovered from an eroded surface. There are a number of significant research questions that can be asked of a Late Archaic site which address information about group size or duration of occupation, prehistoric land use, and subsistence practices. Questions formulated from these topics would require a site to have subsurface remains, large assemblages, in situ features for dating the site, and varied data sets possibly including ethnobotanical or faunal materials. Site 31FY1074 does not possess these requirements. The lack of subsurface remains indicates that the site will not produce further data sets with the potential to address research questions. For these reasons, 31FY1074 is recommended as not eligible for inclusion on the National Register and no further management work is recommended.

Site 31FY1075 is a small lithic scatter located in an erosional gully on a ridge that slopes southeast to a finger of Grassy Creek, approximately 200 feet to the southeast. The elevation along the ridge is 870 feet AMSL. There is no vegetation in the erosional gully where the scatter was located, resulting in at least 75% visibility, if not greater. On the both the northeast and northwest sides of the gully, the vegetation is primarily

low secondary scrub vegetation, which turns to mixed pines and hardwoods at the south end of the gully. Gradually, this vegetation turns to hardwoods and wetland vegetation near the creek. The central UTM coordinates are N4004280 E563040.

Five artifacts were collected from a 30 foot by 75 foot area in the gully during a pedestrian survey. These artifacts include four secondary quartz flakes and an interior quartz flake. Shovel tests were placed at 25-foot intervals on the east and west sides of the gully in an area that did not have an exposed ground surface (Figure 20). These tests did not produce any artifacts.

Pacolet clay loam has a B horizon of yellowish-red (5YR5/6) sandy clay loam, which was exposed at the surface in the erosional gully. The shovel tests contained a few inches of the A horizon, a dark yellowish-brown (10YR4/4) fine sandy loam, but generally less than the expected six inches. These soils suggest that the A horizon on the ridgetop has eroded.

The data sets present at 31FY1075 include only five non-diagnostic lithics. As noted above, the sparse number of non-diagnostic artifacts such as these does not permit a discussion of significant research questions. In addition , the location of the site and the eroded soils at the site suggest that the site will not produce data sets necessary to address significant research questions. For these reasons, we recommend 31FY1075 as not eligible for inclusion on the National Register. No further management work is recommended.

Sites 31FY1076 and 31FY1079 are lithic scatters located along slope faces on dirt roads in the eastern portion of the tract. 31FY1076 is situated on the southern slope, while 31FY1079 sits on the northeastern slope. The elevation of the ridge is 850 feet AMSL, while the two sites have elevations of approximately 840 feet AMSL. The area surrounding the dirt roads is forested with mixed pines and hardwoods, and thick blankets of poison ivy. On the east side of 31FY1069, a dense pine forest has grown up in an old field. The nearest water source is a finger

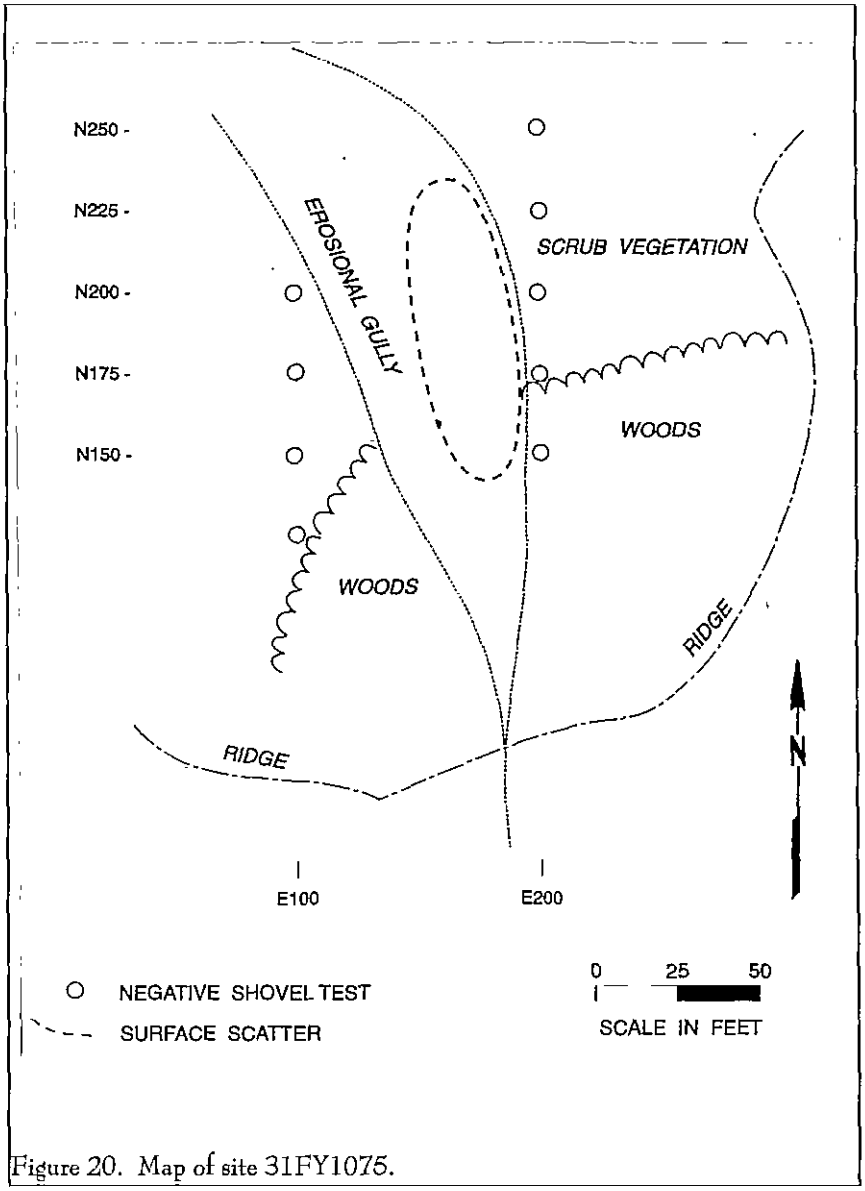

Figure 20. Map of site 31FY1075.

of Grassy Creek 500 feet to the west. Grassy Creek is located 1000 feet east of the sites. The central UTM coordinates for 31FY1076 are N4004210 E563340. Site 31FY1079's central UTM coordinates are N4004290 E563290.

These sites were located during a pedestrian survey of the dirt roads. Eight artifacts were collected from 31FY1076 in an area measuring 25 feet by 50 feet. The artifacts include a secondary quartz flake, four tertiary quartz flakes, and three quartz shatter. Eleven secondary quartz flakes, six interior quartz flakes and a quartz shatter were collected from 31FY1079 in an area measuring 30 feet by 15 feet. Shovel tests were placed at 25-foot intervals on both sides of the road in an effort to determine the subsurface extent of the sites (Figure 21). None of these tests produced artifacts.

Both sites are located on Hiwassee clay loam with six to ten percent slopes. These soils generally have a seven inch A horizon of dark reddish brown (5YR4.4) loam overlying a dark red (2.5YR3.6) clay B

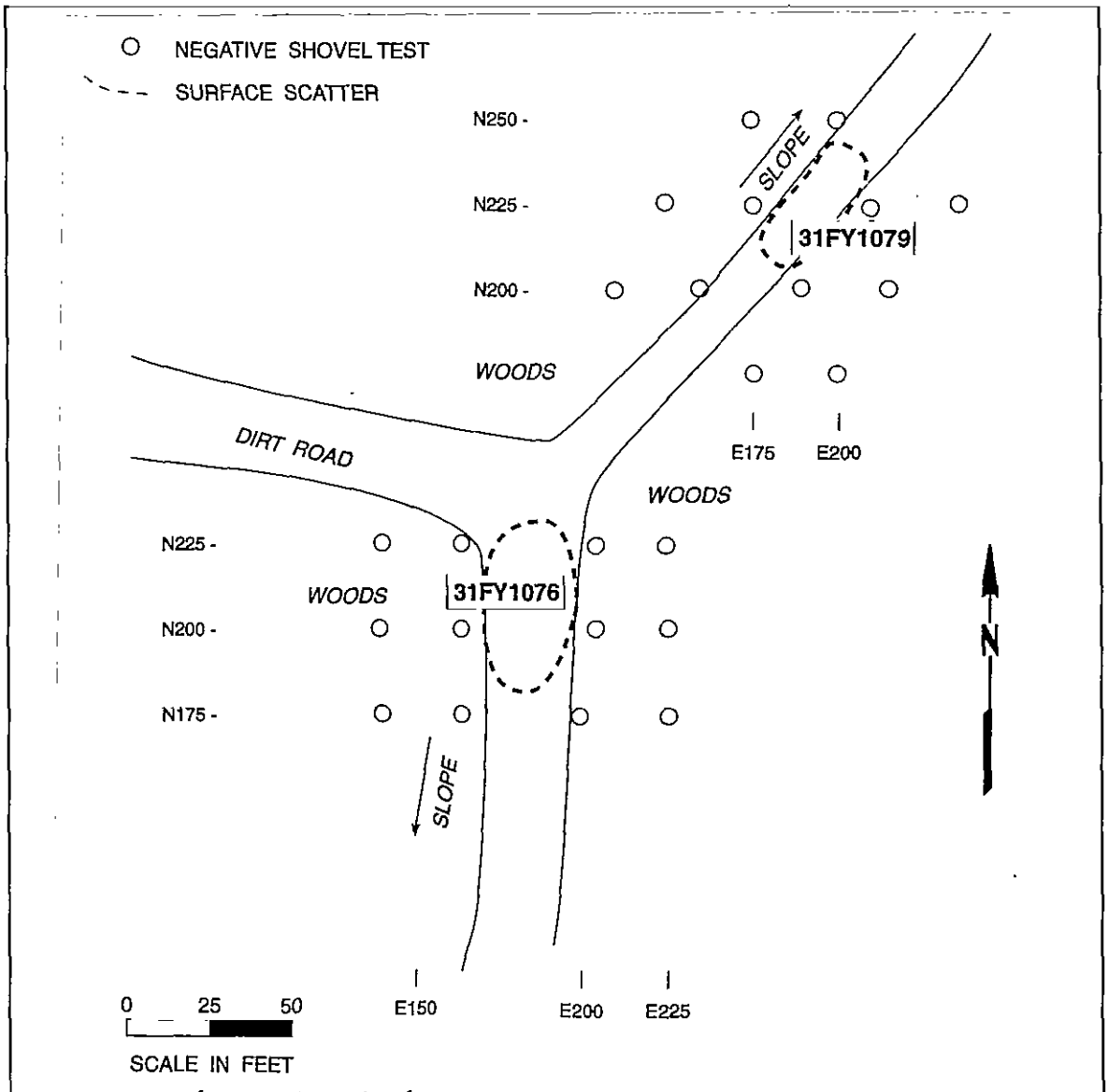

Figure 21. Map of sites 31FY1076 and 31FY1079.

horizon up to 32 inches below the surface. At both sites, the B horizon was visible on the road surface. shovel tests at both sites also revealed a depleted A horizon ranging from two to five inches over the B horizon. The depleted soils and the location of the sites in the roads suggests that the sites have eroded from their original locations.

Both sites 31FY1076 and 31FY1079 have non-diagnostic lithic data sets. Such non-diagnostic artifacts do not evoke significant research questions which the sites will have the potential to answer. In addition, the location of the sites in the roads and the lack of subsurface artifacts suggests that the sites will not produce more data sets with the potential to address significant research questions. For these reasons, we recommend sites 31FY1076 and 31FY1069 as not eligible for the National Register of Historic Places. No further management work is recommended.

Site 31FY1077 is a small lithic scatter located at the bottom of a steep slope 200 feet west of Grassy Creek in the southern tip of the project area. The site was located along a dirt road that runs near the powerlines. Vegetation on the slope included mixed pines and hardwoods and secondary scrub growth. The elevation at the bottom of the slope is 800 feet AMSL. The central UTM coordinates are N4003750 E563640.

The site was located during a pedestrian survey of the dirt road and surrounding area under the powerlines, which had surface visibility ranging from 50 to 75%. Two secondary quartz flakes, three tertiary quartz flakes, and two quartz shatters were collected from an area measuring 25 feet by 50 feet. Five shovel tests were placed at 25-foot intervals in a cruciform pattern centering on the surface scatter (Figure 22). These shovel tests produced no artifacts.

Site 31FY1077 is located on Hiwassee loam with ten to fifteen percent slopes. The dark red (2.5YR3.6) clay B horizon was visible on the surface of the road, while shovel tests soils indicate that the A horizon, a dark reddish brown (5YR4.4) loam, occur for only two to four inches below the surface.

The data sets present at the site include seven non-diagnostic lithics. It is difficult to suggest significant research questions based on so few non-diagnostic artifacts. In addition, the location of the superficial site in an eroded road suggests that the site will not produce data sets with the potential to address

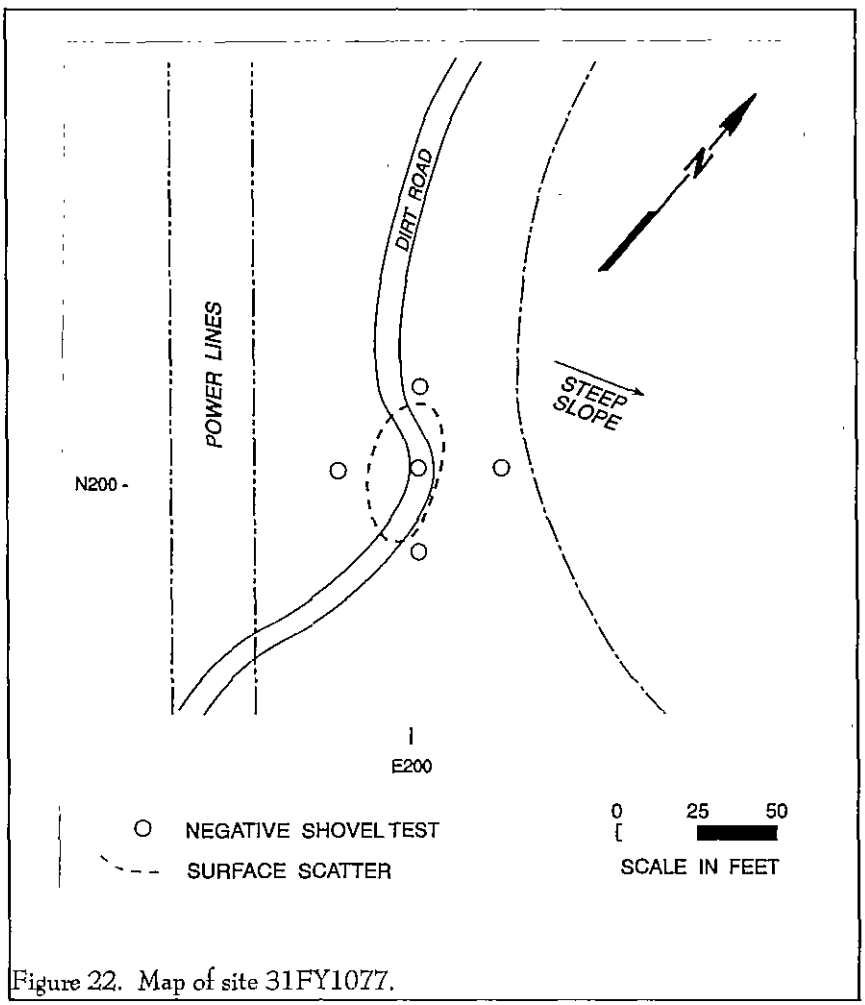

Figure 22. Map of site 31FY1077.

significant research questions. For these reasons, we recommend 31FY1077 as not eligible for inclusion on the National Register and no further management work is recommended.

Site 31FY1078 & 1078** is a multicomponent site located on the southeast slope face of a ridge with an elevation of 850 feet AMSL in the eastern portion of the project area. The site was located during a pedestrian survey of a cleared area between three forested areas that slope to the southeast towards Grassy Creek, located 600 feet to the east. The central UTM coordinates are N4003750 E563440.

Fourteen historic and lithic artifacts were collected from an area measuring 80 feet by 30 feet. These artifacts include a whiteware fragment, a brown saltglaze stoneware fragment, a quartz biface, a primary quartz flake, three secondary quartz flakes, and seven tertiary quartz flakes. These collections prompted shovel testing in a cruciform pattern centered on the middle of the surface collection. A total of ten shovel tests were excavated and two were positive (Figure 23). Shovel test N200 E200 produced a whiteware fragment, a brown glass fragment, and a quartz shatter. N200 E175 produced a brown saltglaze stoneware fragment. The surface collection and shovel tests indicate that the lithic component is mainly represented on the surface, while the historic component is represented on the both the surface and subsurface. The only dateable ceramics recovered from the site include a single whiteware fragment. Undecorated whiteware has a mean ceramic date of 1860 and a date range of 1813-1900, suggesting that the site was occupied in the late nineteenth to early twentieth century.

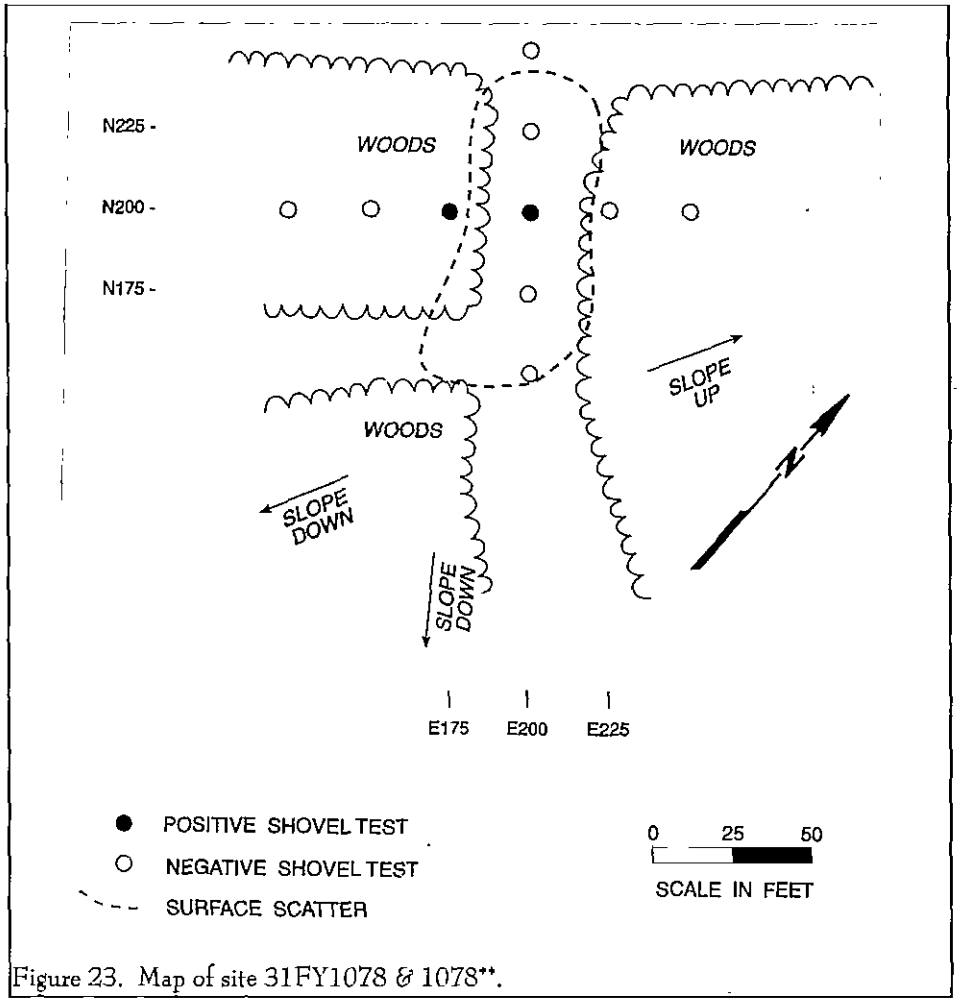

Figure 23. Map of site 31FY1078 & 1078**.

Hiwassee clay loam with six to ten percent slopes generally has an A horizon of dark reddish brown (5YR4.4) loam overlying a dark red (2.5YR3.6) clay B horizon up to 32 inches below the surface. The B horizon was visible at the ground surface at the cleared areas of the site and shovel tests indicated that the A horizon soils have been depleted by up to five inches in some areas.

The data sets present at 31FY1078 and 1078** include historic kitchen group artifacts and non-diagnostic lithic artifacts. While there are a number of pertinent research questions that late

nineteenth and early twentieth century sites can address, such research questions would require a much broader range of data then we have found at 31FY1078 & 1078**. For example, to explore site function, it is necessary for the site to yield more artifacts, features, and material suitable for dating. It is also necessary for the site to exhibit, at the very least, some degree of intra-site patterning, perhaps concentrations of nails or other construction hardware reflected in surface collections or shovel testing density. None of these data sets necessary are present. It seems very unlikely that the site has the ability to provide the data sets necessary in order to address these questions. Likewise, the lithic component of the site has too few subsurface remains to indicate that it will produce data sets with the potential to address significant research questions. For these reasons, 31FY178 & 1078** is recommended as not eligible for the National Register and no further management work is recommended.

Site 31FY1080 & 1080** is a multicomponent surface scatter located at the edge of a cleared and leveled area that was once a slight ridge. The area is now relatively flat, except for the small hill that the site is located on, and covered with sparse grass. Despite the grass, surface visibility ranged from 50 to 75 %, and was greater in areas with large tire ruts. The elevation is 850 feet

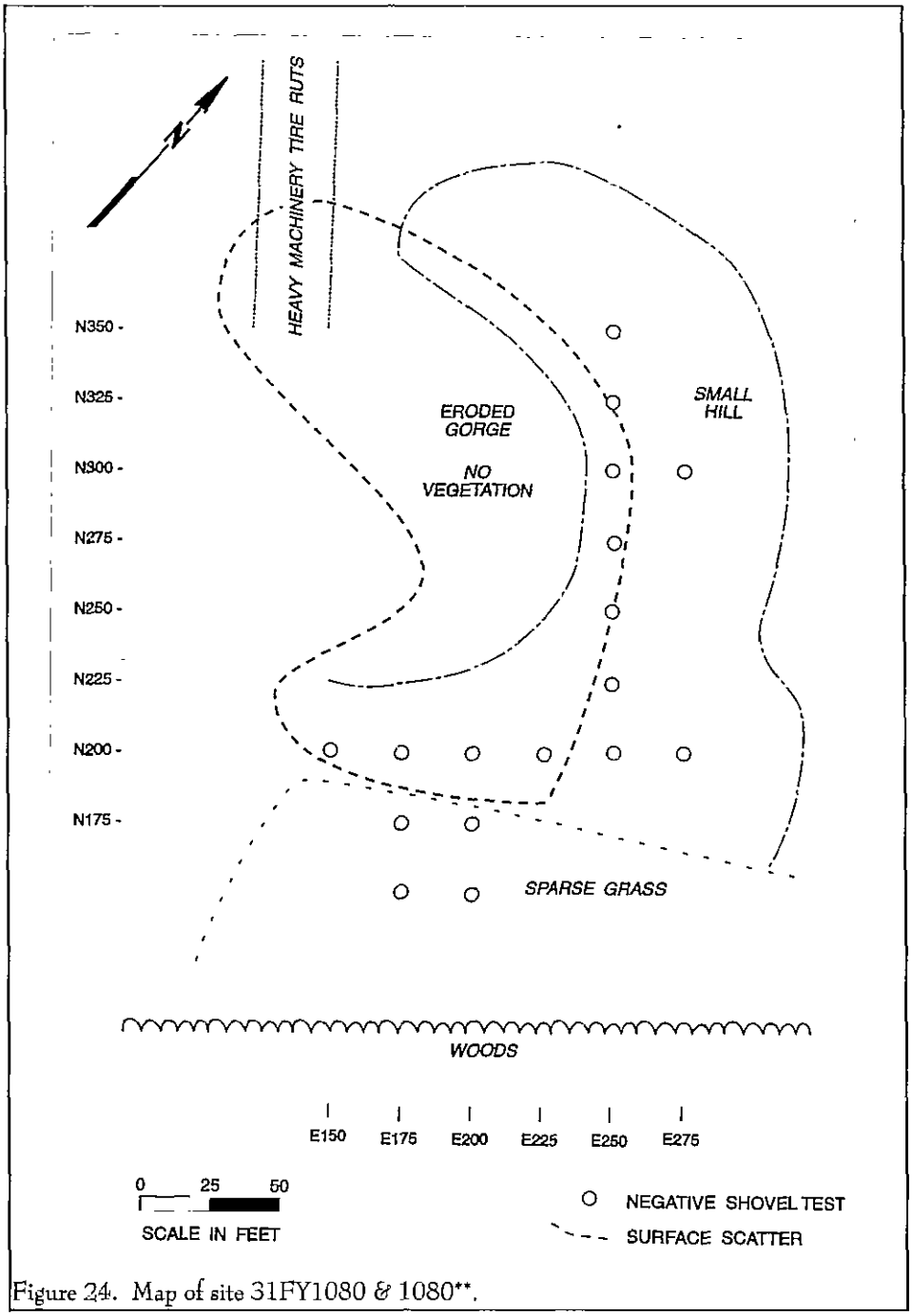

Figure 24. Map of site 31FY1080 & 1080**.

AMSL. The nearest source of water is Grassy Creek, 700 feet east of the site. The central UTM coordinates are N4004400 E563390.

The site was located during a pedestrian survey of the area and a total of 18 artifacts were collected from an area measuring 25,000 ft² (Figure 24). These artifacts include two whiteware fragments, a rhyolite biface fragment, a secondary rhyolite flake, a rhyolite interior flake, two quartz primary flakes, six quartz secondary flakes, and five quartz interior flakes. The majority of the surface scatter was located in an eroded gorge on the southwest side of a small hill. This area had no vegetation and the B horizon soils were evident at the surface, so shovel tests were not dug in this area. Shovel tests were placed in a modified cruciform pattern across the top of the hill and at the southeast bottom of the hill. None of these shovel tests produced artifacts.

The site is located on Hiwassee clay loam with two to six percent slopes. In general, these soils have an A horizon in the upper seven inches of soil below the surface of reddish-brown (5YR3/4) loam, overlying a B horizon of dark red (2.5YR3/6) clay. As mentioned above, the B horizon was visible on the surface of the eroded gorge. The shovel tests revealed that the A horizon has been depleted by five inches. This erosion is most likely due to the clearing, and leveling of the area.

The data sets present at the site include two historic artifacts and sixteen non-diagnostic lithics. Both site components contain too few artifacts to suggest significant research questions. The superficial nature of the site and the disturbed area in which the site was located indicates that the site will not produce data sets with the potential to address significant research questions. For these reasons, 31FY1080 & 1080** is recommended as not eligible for the National Register. No further management work is recommended.

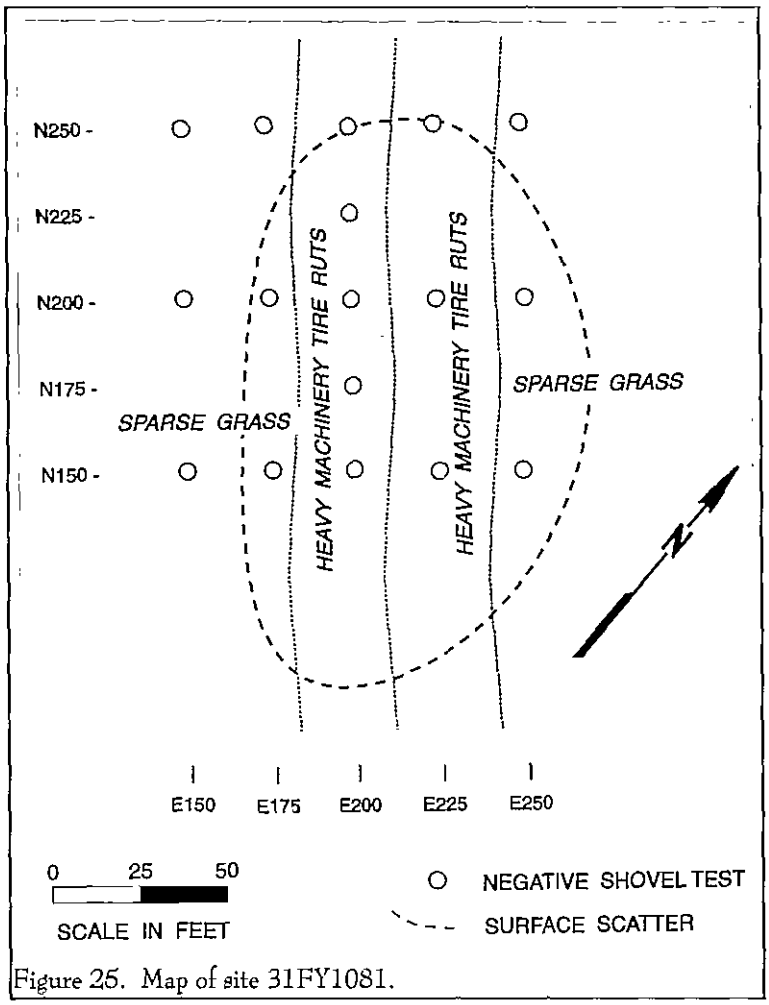

Figure 25. Map of site 31FY1081.

Site 31FY1081 is small lithic scatter also located in the area that has been cleared and leveled adjacent to a currently used borrow pit. The elevation in this area is 860 feet AMSL. The site had also been damaged by large machinery which left tire ruts, exposing the B horizon. The ground visibility was 75 to 100%, with only sparse grasses covering the area. Grassy Creek is the nearest water source, located 1100 feet to the east. The central UTM coordinates are N4004400 E563290.

The site was located during a pedestrian survey of the area and a total of four artifacts were collected from an area measuring 75 feet by 200 feet (Figure 25). These artifacts include a primary quartz flake and three secondary quartz flakes.

Seventeen shovel test were placed in the area of the surface scatter in an effort to determine the subsurface extent of the site. These tests produced no artifacts.

Site 31FY1081 is located on Hiwassee loam with two to six percent slopes. As mentioned above, the B horizon was visible on the surface of most of the site, and in areas of sparse vegetation, the A horizon extended to a depth of only two to three inches, indicating that the four to five inches of the A horizon have eroded. The leveling of the area has most likely caused this erosion and has also damaged the site.

The data sets at 31FY1081 include only a small number of non-diagnostic lithics in a damaged and exposed area. This indicates that the site does not have sufficient data sets necessary to address significant research questions and will not produce data sets with this potential. For these reasons, we recommend the site as not eligible for the National Register and no further management work is recommended.

Site 31FY1082 is a small lithic scatter located on the edge of a leveled area next to a borrow pit that is currently being used. The area is bare of any vegetation and the B horizon soils are visible at the ground surface. Grassy Creek is the nearest source of water, located 1200 feet to the east. The elevation of the area is 870 feet AMSL. The central UTM coordinates are N400450 E503270.

The site was located during a pedestrian survey of the area. A primary quartz flake and an interior rhyolite flake were collected from the surface of an area measuring 80 feet by 50 feet. Eight shovel tests were excavated in the area of the surface collection in an effort to determine the subsurface extent of the site (Figure 26), but these shovel tests produced no artifacts.

Hiwassee clay loam with two to six percent slopes generally have an A horizon of seven inches. At this site, the A horizon has been completely eroded, leaving only B horizon soils. This indicates that the site has been subject to at least seven inches of erosion.

Data sets present at 31FY1082 include two non-diagnostic surface lithics. These artifacts are too few to suggest significant research questions. The site also has been damaged through leveling and erosion, making it very unlikely that the site will produce data sets necessary to address significant research questions.

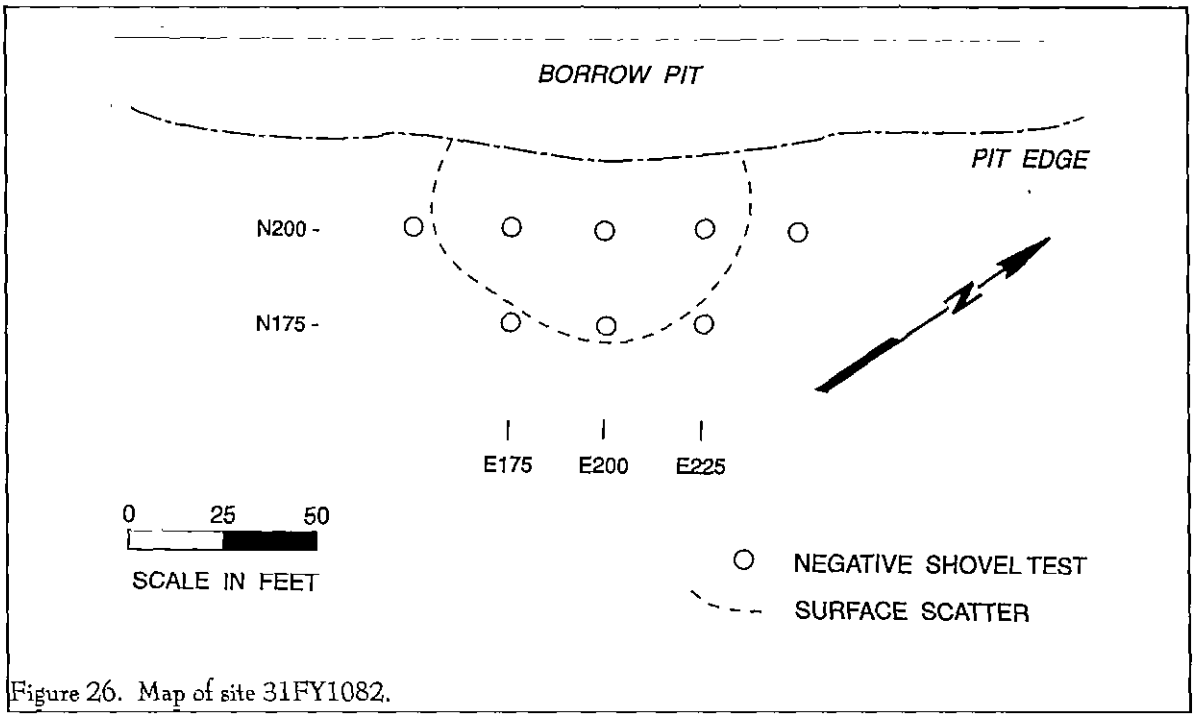

Figure 26. Map of site 31FY1082.

For these reasons, we recommend the site as not eligible for the National Register and no further management work is recommended.

Site 31FY1083 is a small lithic scatter located on the vertical side of the borrow pit in the central portion of the project area. The borrow pit is currently being used. The nearest water source is Grassy Creek, located 800 feet to the east. The central UTM coordinates are N4004520 E563320.

The site was located during a pedestrian survey of the area. The primary quartz flake and secondary quartz flake were collected from an area measuring 60 feet by 30 feet (Figure 27). It was not possible to excavate shovel tests on this steep side of the pit, and no artifacts were found on the level ground adjacent to the pit. The soils in this area belong to the Hiwassee clay loam series with two to six percent slopes.

The data sets at this disturbed site include only two non-diagnostic lithics. These artifacts are too few in number to suggest significant research questions and the location of the site, on the side of borrow pit, indicates that the site will not produce data sets with the potential to address significant research questions. For these reasons, we recommend the site as not eligible for the National Register and recommend no further work.

Site 31FY1084** is a small historic scatter located on a steep slope face along a dirt road in the eastern portion of the tract. Both sides of the road were heavily forested with oaks, pines and thick blankets of poison ivy, while the road itself was free of vegetation and had 100% visibility . Grassy Creek, the nearest water source, is located 700 feet to the east. The central UTM coordinates are N4004220 E563400.

One brown saltglaze stoneware, a red earthenware with a brown lead glaze, and two whiteware fragments were recovered from an area measuring 35 feet by 12 feet (Figure 28). Shovel tests were not excavated due to the steep slope, but the area was pedestrian surveyed in an effort to locate any structural remnants or other historic resources. None were located. The site is located on Hiwassee clay loam with two to six percent slopes. The B horizon, a dark red (2.5YR3/6) clay was visible on the surface of the road.

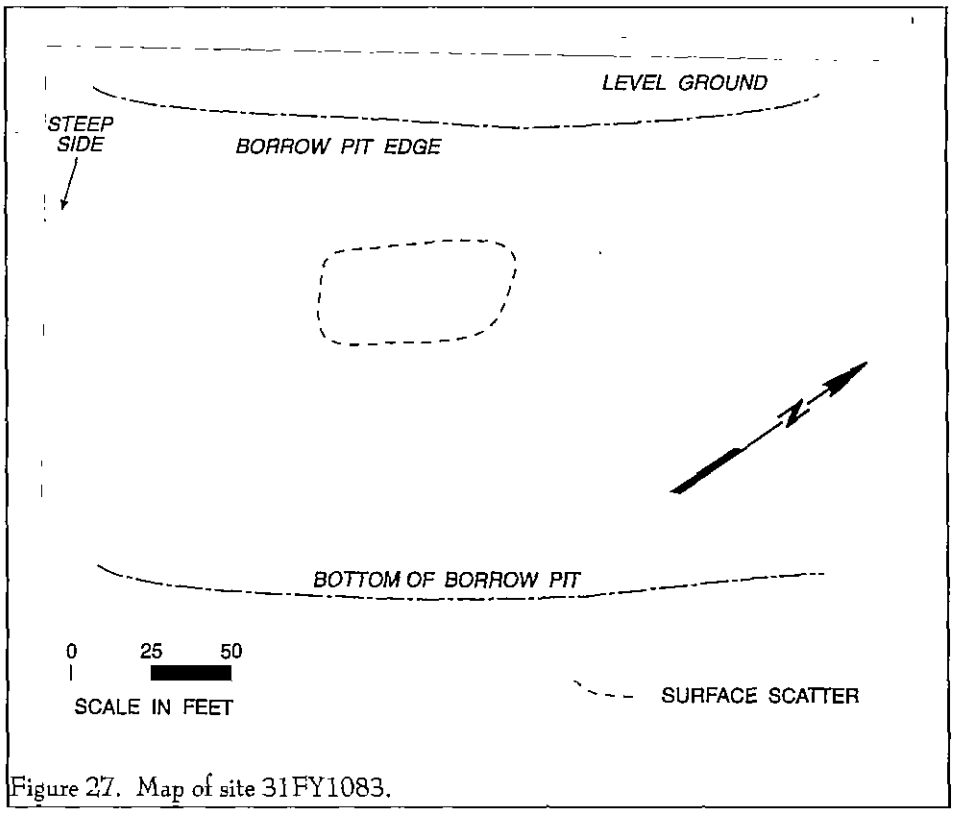

Figure 27. Map of site 31FY1083.

The data sets present at the site include only four historic ceramics. While the whiteware suggests a date range of the late nineteenth to the early twentieth century, there are too few artifacts to suggest an occupation date, especially since this site appears to be slope wash. It is unlikely that the site will produce data sets with the potential to address significant research questions. For this

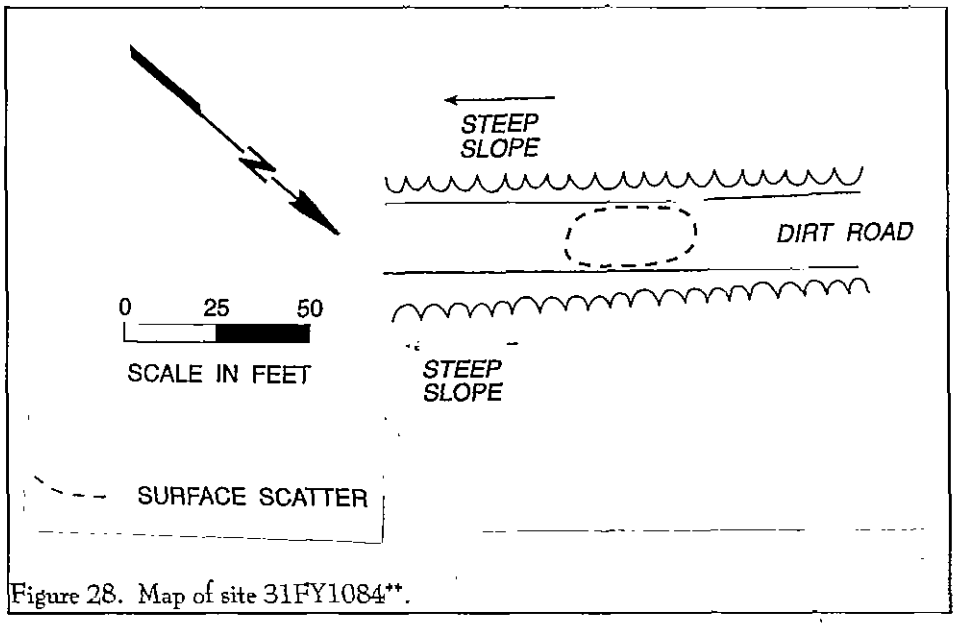

Figure 28. Map of site 31FY1084**.

reason, we recommend the site as not eligible for the National Register and no further management work is recommended.

Although there were no Historic Resources located on the tract, a "wagon road" was reported to have existed in the southern portion of the project area. Our archaeological investigations found no evidence of such a road. In addition, the intensive historic research of the area produced no mention of the wagon road in Forsyth County. The Architectural Survey branch of the North Carolina Department of Cultural Resources had no record of a wagon road in Forsyth County (April Aleprin, personal communication).

SUMMARY AND RECOMMENDATIONS

The Hanes Mill Landfill Expansion 260 acre tract in Forsyth County was surveyed in order to locate and record archaeological sites and historic resources present on the tract. The surveys were conducted using shovel tests along transects spaced at 100-foot intervals in 100 or 200-foot increments. In addition, under conditions of excellent ground visibility, pedestrian surveys were also undertaken. Sites located during the survey were tested by shovel testing at 25 or 50-foot intervals.

The survey tract is located in the Piedmont Plateau in the north-central portion of North Carolina. The topography of the Piedmont is characterized by gently sloping to moderately steep hills with fairly broad ridges, and dendritic drainage..

The survey tract included a variety of natural and man-made environments, including steep forested slopes, forested ridgetops, low wetlands, pasture, mixed pine/hardwood forests, and a borrow pit. The eastern portion of the tract is bordered by Grassy Creek, and two fingers of the creek run through the tract, creating the low wetlands.

As a result of the archaeological survey of the Hanes Mill Landfill Expansion tract, a total of 20 archaeological sites were located and recorded. These sites include fifteen lithic scatters (31FY1065, 31FY1066, 31FY1067, 31FY1069, 31FY1070, 31FY1071, 31FY1072, 31FY1074, 31FY1075, 31FY1076, 31FY1077, 31FY1079, 31FY1081, 31FY1082, and 31FY1083), three historic sites (31FY1068**, 31FY1073**, and 31FY1084**), and two multi-component sites (31FY1078 & 1078**, and 31FY1080 & 1080**). All of these sites are recommended as not eligible for inclusion on the National Register of Historic Places, pending concurrence by the North Carolina State Historic Preservation Office. No further work is recommended for these resources.

Although we have been unable to discover any definitive historical information on the location of the "Grand Wagon Road," some individuals have suggested that remnants may be in the general vicinity of this project. Our field investigations have not revealed anything which appears consistent with a historic road. Consequently, we can make no recommendations concerning this resource.

It is possible that archaeological remains, perhaps even some short segment of the posited "wagon road," may be encountered in other portions of the survey tract during construction activities. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the North Carolina State Historic Preservation Office or to the client's archaeologist. No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist.

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